“Language Barriers in the Emergency Centre (EC): A survey of secondary public hospital EC doctors on the perceived presence and impact of language barriers"

By

Dr Nasreen Docrat

MBChB

Student number: DCRNAS001

This study is in partial fulfilment of the requirements for the degree Master of Philosophy (Emergency Medicine) in the Faculty of Health Sciences at the University of Cape Town

Supervisor: A/Prof Peter Hodkinson

Co Supervisor: Prof Ana Deumert

2020

Declaration

I, Nasreen Docrat, hereby declare that the work on which this thesis is based is my original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is said to be submitted for another degree in this or any other university.

I authorise the University to reproduce for the purpose of research either the whole or any portion of the contents in any manner whatsoever.

Signature: N.Docrat Date: 24/03/2020

Signed by candidate

Acknowledgements

No publication is entirely the work of one person. It is impossible to thank those enough who have contributed their time and effort. Thanks to:

- My husband, children and family, for moral support, and for allowing me to ignore you so I could complete this project
- My supervisor A/Prof Peter Hodkinson of the Division of Emergency Medicine, University of Cape Town, for his guidance, patience and time in helping motivate and guiding me during each step of this process
- My co-supervisor Prof Ana Duemert from the Linguistics Department, University of Cape Town for all her help with developing the survey and input along the way
- All the Emergency centre doctors at NSH, ERH, KH, MPH, VHW, and KBH for taking the time to participate and fill out my survey as well as the HODs of these facilities in assisting me with appropriate emails and helpful reminders
- To Michelle Henry who assisted me to go through all my results and assisted me with presenting of results.

Presentations arising from this study

None

Definitions of terms

Emergency Centre

- Centre providing urgent healthcare 24 hours a day

Emergency Medicine (EM)

- The division of medicine that gives emergency care to patients

List of Abbreviations

EC: Emergency Centre

LEP: Limited English Proficiency

RCWMCH: Red Cross War Memorial Children's Hospital

VHW: Victoria Hospital Wynberg

NSH: New Somerset Hospital

ERH: Eerste River Hospital

KH: Khayelitsha Hospital

KBH: Karl Bremer Hospital

MPH: Mitchells Plain Hospital

UCT: University of Cape Town

NHRD: National Health Research Database

WCDoH: Western Cape Department of Health

Table of Contents

List of Figures and Tables

Figures

Tables

Part A: Literature Review

Objectives of Literature Review

• To describe the importance of language as a medium of communication in health care

• To describe the amplified negative effect of these language barriers in the Emergency Center (EC)

• To describe international literature findings on effects of language barriers in health

• To describe the South African healthcare challenges with regards to communication and languages spoken

• To describe previous South African evidence on the effects of the language barrier on patients and staff

.

Literature Search Strategy

To identify relevant articles a systematic search of the literature was performed. The databases PUBMED, MEDLINE and COCHRANE were searched for articles published between January 1995 and January 2020. Google and Google Scholar were also searched to identify relevant literature. In each database, a search was performed using the terms: "language barriers and health, communication barriers and health, language barriers in health and South Africa". Relevant articles identified in the references of sourced articles were also reviewed. Titles and abstracts were initially screened for relevance to the review. Articles that related to language barriers and language difficulties within the health context were screened. Articles with low relevance were excluded.

Literature Review

Introduction

Many patients throughout the world are seen in an Emergency Center (EC) where none of the doctors are able to communicate with them in a language in which they can express themselves with ease. They may be experiencing chest pain, which in itself is anxiety-inducing and often makes it difficult to communicate. They then have the added burden of trying to make the doctors understand their symptoms in another language. This unfortunate circumstance is only too real for refugees in foreign countries, minority groups, asylum seekers and in the case of South Africa, a significant part of the population in their own country.(1, 2) The Oxford English Dictionary defines communication as, "the activity or process of expressing ideas and feelings or of giving people information, speech is the fastest method of communication between people".(3) This review describes the international literature around language barriers in health care, current methods and effectiveness of these methods used to overcome language barriers, and then in the SA emergency care environment.

Significance of language barrier in emergency health care

In busy ECs the world over, medical staff need to be able to determine the cause and degree of severity of an illness quickly and efficiently. Communication is vital to patient-doctor interactions. Doctors need to take a history to formulate a differential diagnosis, explain a plan of action or treatment, take consent for procedures, and explain discharge instructions to patients and care-givers. The more complex or emotional the condition, the greater the need for language proficiency to achieve adequate care.(4, 5)

In numerous international studies it has been strongly noted that language barriers in doctor-patient interactions have significant adverse outcomes for patients and their families. They can also add additional strain to the health care system.(2, 6-8) In an American cross-sectional study conducted on patients 10 days after they presented to the emergency department, more than 50% of non-English speaking patients were not satisfied with their experience, and a significant percentage attributed it to communication problems. (6) Another study found that doctors altered their approach when faced with a language barrier which resulted in a higher rate of resources being used and longer

duration of time in the EC(2). A troubling adverse effect of language barriers found by Jacobs et al (4) showed limited English proficiency patients being more at risk due to medical errors when compared to English speakers. From the literature it is evident that language barriers, in health care and the EC, undoubtedly result in suboptimal clinical outcomes, increased use of already limited resources and poor patient satisfaction (1, 2, 4, 6, 7, 9-12).

International strategies around language barriers

In recent years the issue of language barriers in health care has come to the forefront, partly due to civil unrest and war, resulting in mass population displacements. Many European countries have experienced large numbers of refugees which bring to the fore the problem of patients being unable to communicate with health care professionals (5-8). Meeuwesen (12) found that some countries such as the Netherlands have recognized the importance of good communication and professional interpreter services are available by telephone within two minutes. This has been legislated and made possible with government funding. In many other countries practitioners regard communication as the migrants' problem or responsibility, thus inadvertently neglecting patients' rights. In 2000, the United States Department of Health and Human Services Office for Civil Rights, stated that "denial of adequate interpreter services to patients with Limited English Proficiency (LEP) is a form of discrimination".(11) Similarly, in 2013 the Israeli government passed laws stating every patient had the right to discuss their problems in their mother tongue(12).

In the face of the current humanitarian crises throughout the world many studies regarding the impact and best possible solutions to language barriers in the EC have been undertaken(4, 6, 7, 9-11, 13-16). To assess if legislation in the USA improved communication, Lee et al(11) in 2006 conducted a national survey across 149 academic hospitals and received 2,047 responses (a 60% response rate). In it she found that only 55% of doctors took time to assess if patients required an interpreter and of these only 35% used a medical interpreter. When faced with language barriers 84% of respondents indicated they used ad hoc (informal) interpreters 77% of the time in the form of adult family members, friends, and other hospital employees, and 22% (including 37% of paediatric and emergency medicine residents) used children. Lee et al (11) concluded that even with legislation, when faced with language barriers, most doctors used informal interpreters including minors. This practice may result in negative consequences such as misinterpretation and miscommunication either due to poor language skills by the interpreter, poor knowledge of terms, and mismatch of words between languages resulting in persistent suboptimal outcomes. Based on numerous studies the international literature supports the use of professional interpreters (4, 6, 8-11, 14, 17). A professional interpreter should be a person who has proficiency of language, is trained in medical terminology, is culturally sensitive, has good personal skills and is certified by a reputable institute (18, 19). Use of such interpreters have been shown to result in a reduction of unnecessary tests, treatments, admissions, improved adherence, reduced hospital stays and need for re-admission, thereby improving overall quality of care and patient satisfaction(4, 6, 7, 9-11, 13-16).

Swartz et al (17) stated "the issue of language diversity is in fact greater in many low and middle-income countries, however affordable models for making health services available to a range of linguistic communities are scarce".(17) In low income countries legislation may be enacted, however financial restraints and already strained health systems do not have the luxury of training and deploying professionally trained interpreters. An example of this is a Ghanaian initiative looking at using a pre-existing technology by creating a mobile application to improve health information given to patients instead of expensive training of interpreters.(15) By dialling a specific code health information in a specific language is sent to the patient by text message. This however is used more for doctor-patient interaction in non-urgent situations.

Language in South African Health Care and the use of informal interpreters

In South Africa, research on language barriers was scarce prior to 1993 and the end of apartheid rule. In a notable study done soon after the first democratic election in South African (1993-94), Crawford (1) interviewed doctors, nurses and patients over an eighteen month period at two major inner-city academic hospitals and in three township-based day hospitals in Cape Town. Crawford recognized and documented that there were discrepancies in doctors' ability to communicate with isiXhosa speaking patients in the Western Cape and that the problem would only get worse with the increased movement from the rural areas to the greater Cape Town metropole. Of importance, due to

apartheid in South Africa, Crawford, commented on the power dynamic between doctors, nurses and patients whereby doctors are in the dominant position during any consult and patients are often disempowered. Crawford argued that the language barrier was yet another tipping scaling leading to greater power of the doctor over nurses and patients. This led to nursing staff reporting that they had no choice in interpreting, no recognition for it by the doctors who felt it was their job, and no remuneration as it was an additional task to their already busy workload. Crawford's article, "We can't all understand the white's language: an analysis of monolingual health services in a multilingual society" (1) stated that no ready-made international solutions could be applied to the problem faced by South Africa as it was a problem that was institutionalized over a considerable period of time. The article pointed out the fact that accepting the problem would be "painful" due to the legacy of the previous government policies but was hopeful as a "rainbow nation" that this could be resolved, as at the time the country was in a total state of transformation. She concluded "for health care is to become accessible and effective, the political will to address the 'language barrier' at all levels will have to be found." (1)

Soon after Crawford conducted his study the new constitution of South Africa was adopted and the importance of communication was well recognized in South African law with all services guided by the Batho Pele principles(20). These are aligned with multiple constitutional ideals such as "providing service impartially, fairly, equitably and without bias" and "utilising resources efficiently and effectively" (21). These principles also acknowledge the patients' rights charter which states "a patient has the right to be given full and accurate information in order to be able to make a decision on testing or treatment and all necessary health information must be given to a patient in a language understood by the patient and any proposed treatment must be explained to the patient"(22).

As previously noted legislation alone is not always enough even in countries without limited resources. In 1998, a study at Chris Hani Baragwanath Hospital (Johannesburg) by Saohatse (18) still found language barriers to be a significant problem in both hospital wards and in the EC. Nursing staff or lay interpreters, were still being used as no formal interpreters were available. In a series of scenarios in different areas of the hospital it was concluded that the use of informal interpreters resulted in poorer quality of care, inappropriate discharge, patient distress, medical consequences and non-compliance with medication(18).

In 2005, a study explored the consequences of language incompatibility between clinicians and patients. Levin (23, 24) found, that both language and culture resulted in a misunderstanding of basic asthma care between doctors and isiXhosa speaking parents at Red Cross War Memorial Children's Hospital (RCWMCH), Cape Town. Levin described that doctors in many South African ECs' relied on codeswitching (with doctors and patients switching between two languages) allowing the patient to converse in his/her own first language and the doctor to respond in their own language. A basic understanding of essential terms and phrases helped to improve communication but also led to misunderstandings as often certain words do not exist in another language or in the vocabulary of the patient or doctor(23, 24). These misunderstandings often occur even when patient-doctor interactions occur in the same language due to medical terminology not being explained in layman terms. As found in the above study this is worsened when only a few basic terms were learnt.

Levin's (25) follow up study in 2006 aimed to identify barriers to optimal care for isiXhosa-speaking parents of patients at RCWMCH. A questionnaire was administered to isiXhosa-speaking parents of children admitted to the short stay ward at RCWMCH. Parents stated the following difficulties: understanding doctors (64%), making themselves understood (54%), asking questions (38%), dissatisfaction with communication (69%) and concern about negative consequences (45%) for them or their children. Overall, more parents reported communication problems as more troubling than structural or socioeconomic concerns. The study concluded that barriers to good care for isiXhosa-speaking parents were first due to language issues, closely followed by socioeconomic issues. Levin ultimately suggested, as did previous American studies, that more interpreters should be available and that medical staff should receive language training in order to holistically care for their patients (24-26).

In 2006 Schlemmer et al (27) conducted interviews with members of staff and patients at Hottentots Holland Hospital (HHH), a district hospital in the Cape Town metropole. Staff mainly spoke Afrikaans or English and patients predominantly isiXhosa. Language barriers were found to result in poorer work efficiency and reduced certainty of diagnosis. They also caused ethical dilemmas in trying to take consent, negatively influenced patients and staff attitudes towards each other, decreased satisfaction with care and caused cross-cultural misunderstandings. Staff recommended language and culture training, even with the extended workload this brings, to be the best solutions in addition to medically trained interpreters.

In 2010, in conjunction with the Western Cape Department of Health, Deumert (28) conducted an empirical study in three public hospitals (one each of metropolitan, urban, and rural hospitals) in the Western Cape. It focused on how the medical system in the Western Cape was coping with language related issues in the face of increasing numbers of isiXhosa-speaking patients. Expanding on previous studies this article took a look into 'unproductive patient–provider interactions' and argued that linguistic issues played a central role in such interactions. It is stated that the minimum criteria for communication is a common language. In a multilingual South Africa, this could, however, prove challenging. Questionnaires, staff and patient interviews as well as ethnographic observation were the source of data. Interviewees included nurses, doctors, pharmacists, therapists as well as non-medical staff who had direct contact with patients, and/or were regularly pressed to be interpreters. The results were in keeping with previous studies with patients expressing dissatisfaction with doctors' inability to communicate and care. It was concluded that the language barrier at the hospitals studied lead to the systematic marginalization of patients who couldn't express themselves in the main language(s) used by health providers. It was strongly suggested that what was needed was comprehensive, professional interpreting services at each health facility. Deumert stated "language and communication are essential for equitable and effective health delivery in multilingual societies. 'Unproductive patient–provider interactions' due to language barriers directly impede medical diagnosis, treatment, health education, and trust".(28)

Hussey (29) in 2013, echoed the sentiments of studies before when she stated "communication can become time consuming, which increases frustration levels and decreases empathy, approachability and confidentiality" and that untrained, ineffective interpreters and overworked nurses are not suitable to address the problem and multilingual education, as a part of professional training, and trained interpreters are required.

A systematic review by Tate (30) in 2015 brought forward the need for more research on the effects of language barriers and ways to limit adverse outcomes due to language barriers in the pre-hospital setting. A follow up study the following year by Tate et al (31) examined communication strategies used by emergency medical personnel when challenged by language barriers as part of an, international study, in the Western Cape (South Africa) and New Mexico (USA). Across the study, 3rd party telephonic interpreters were available at both sites (although seldom used in SA) and noted to be the most effective strategy, with limitations being time delays. Field providers across both sites also used similar techniques such as relying on bystanders, multilingual co-workers and nonverbal communication. Other limitations also noted were time delays, breaches of patient confidentiality, and inaccurate interpretation.

In 2016, two additional studies were conducted by Penn et al (32, 33) which focused on pre-hospital language barriers. Penn et al successfully decreased time to dispatch medical personnel using conversational analysis at a call centre in the Western Cape. Training call takers to be more precise with their introductions and acknowledging the callers preferred language was the key.

Significant time has passed since Crawford's conclusion in 1993 that professionally trained interpreters would be needed and that legislation would be required to ensure change. In the Western Cape, legislation in the form of the Western Cape language policy (34) is in place but from the above studies it is clear that the ideal of having trained interpreters in the health system has still not been realized. This is perhaps best summed up by the article "Still lost in translation" (35), which reviewed relevant medical and linguistic journals dealing with the language barrier in South Africa. It stated that in 2016 it was still common practice in South Africa to use family members, nurses, cleaning staff and even sometimes fellow patients as interpreters. The use of informal interpreters resulted in lack of patient confidentiality, miscommunication with possible misdiagnosis and life threatening consequences and patient dissatisfaction. In addition staff such as nurses often became resentful at having to interpret in addition to their own duties in a busy stressful EC(35).

Just as many countries are struggling to find a solution to language barriers in health care, South Africa is also attempting to bridge the gap between the legislative ideal and the reality of limited resources.

Possible solutions for language barriers in the South African Health System

With 11 official languages in South Africa, different languages are prevalent in different regions of the country. In the Western Cape, according to the 2011 census, 34.9% of the population spoke Afrikaans, 29.2% spoke isiXhosa and 27.8% spoke English as their first language (32). The Western Cape initiated a language policy in 1998 that equally recognizes English, Afrikaans, and isiXhosa in all aspects of government services(34).

Community Trained Interpreters

In South Africa it has been noted that English was used in more than 80% of medical interactions occurring across language and cultural barriers and most consultations were in a patient's second or third language (23). In December 2011, based on studies from Crawford, Levin, Hussey, Tate and many others the Western Cape Department of Health initiated a pilot project to train community interpreters to help address the language barrier experienced by isiXhosa-speaking patients. Fifteen first-language isiXhosa speakers who had graduated with a minimum of Grade 12 (Matric) were recruited on a contract basis. They received a three day training course in Interpreting and Psychiatry, after which they were placed in six Western Cape Public hospitals as intern interpreters. Due to funding reduction by March 2012, all interns were re-appointed as administrative personal. By this stage only eleven interpreters were still employed due to attrition and resource constraints. It was only in 2013 that permanent posts were created by the Department of Health for these interpreters and by then a further two had resigned. Benjamin et al (36) concluded that most community trained translators were not emotionally or practically prepared for the challenges of translating, and there was uncertainty between the government and health department about how community translators fit into the health system. There was a disagreement between the government, health department and hospitals as to who is responsible for paying these community trained interpreters. Within the hospitals the interpreters felt underutilized and were often used more for administrative roles rather than for their interpretation skills. It was concluded that the issues of roles, remuneration, supervision and emotional support would need to be addressed immediately(36).

It has been proposed by Van Den Burg (35) that perhaps the best solution for the South African context would be specialised interpreters who are trained in medical terminology. "Being able to converse with patients in their first language builds respect, trust and rapport between healthcare providers and patients, while improving cross-cultural understanding, all of which are vital components of effective patient care"(35).

Telephone Interpreters

The use of 3rd party telephonic interpreters was explored in a prehospital study and found to be more effective than no interpretation or informal interpretation. The main limitations were time delays(31). In a busy South African EC, time delays are not only economically costly but can cause significant comorbidity due to delay in information and ultimately treatment.

In the Western Cape, a telephonic interpretation service, called Folio Intertel Telephonic services is currently available to government hospitals but further study needs to be done to ascertain if this resource is being used or if it has reduced the effect of the language barrier.

Health Professionals Learning More Languages

Recently, there has been a push towards health care professionals being culturally competent(37), that is to learn a set of attitudes and communication skills that allow them to be sensitive to the culture of their patients. However in the article "Cultural competence or speaking the patient's language?" it is argued that in order to be culturally competent as professionals, language must be systematically addressed in medical institutions(37).

English is the dominant language in South African universities, despite the fact that it is only the sixth most spoken home language across the country(38). The public health system is responsible for the majority of uninsured, poorer South Africans whose first language is not English(29).

In 2019, Docrat et al (38) showed that South African Universities are now progressively more aware that students need to be more linguistically competent to properly help the majority of people accessing their expertise who can't speak English. Although vocation specific language courses were available soon after the apartheid era, Crawford (1) noted that these course were not mandatory and did not affect students grades.

Today each University has its own language policy and can vary this from course to course even within the same institution. At Rhodes University isiXhosa is mandatory in journalism and an elective for pharmacy students. At UCT, isiXhosa and Afrikaans courses are integrated into the medical degree and must be passed. The University of Limpopo has a bilingual (Sesotho/English) Humanities degree. The boldest step has been taking by the University of KwaZulu-Natal (UKZN) which implemented a policy that all graduates must learn isiZulu regardless of their degree(38).

Mathews et al(39) used a survey, written test and oral exam to ascertain if 3rd year UKZN students had an improved ability to converse in isiZulu. It was found that students had a positive attitude to learning isiZulu and rated their

competence of the language higher. Ability to write the language also improved but their ability to communicate with patients had not improved sufficiently for it to be used practically.

UKZN has now implemented the use of video technology which simulated clinical scenarios in isiZulu for communication and language teaching(40). Other institutions such as North West University and the University of South Africa, are also investigating technology to assist with language learning(38).

At the University of Stellenbosch, a study was conducted using formal lectures and e-learning to teach isiXhosa as a second language to first year occupational therapy students. On completion a majority of students indicated that adding e-learning to formal classes helped them learn the additional language(41).

In an ideal world all doctors would be able to communicate with their patients in a common language. South African health departments, universities, doctors and allied health professionals have recognized the vital importance of being able to communicate with patients in their own language. With this common goal each establishment has tried to implement changes to try and reduce the impact of language barriers in the health system.

Conclusion

Internationally and in South Africa it has been recognized that reducing the language barrier is vitally important to health care. Despite legislation, improvement of language access in the South African health system has been slow. A majority of South African studies regarding language barriers in health have been conducted in the Western Cape, with community trained interpreters, telephonic services and positive language policies being implemented at medical schools. In 2019, how far have we progressed? Having implemented these positive steps have we been able to solve the problem or do doctors in the Western Cape still perceive there to be a language barrier and if so what effects do these barriers still have?

Has legislation, and change in mind set resulted in meaningful change to ensure that all citizens of South Africa have equal opportunity to be addressed, in their greatest time of need, in a language they understand and relate to.

References

1. Crawford A. "We can't all understand the whites' language": an analysis of monolingual health Services in a multilingual society. International Journal of the Sociology of Language. 1999;136(1).
2. Hampers LC, Cha S, Gutglass DJ, Binns HJ, Krug SE. Language barriers and resource utilization in a pediatric emergency department. Pediatrics. 1999;103(6 Pt 1):1253-6.
3. . Oxford English Dictionary (https://www.oxfordlearnersdictionaries.com/definition/american_english/communication) accessed 26-01-2020.
4. Jacobs EA, Lauderdale DS, Meltzer D, Shorey JM, Levinson W, Thisted RA. Impact of interpreter services on delivery of health care to limited-English-proficient patients. Journal of general internal medicine. 2001;16(7):468-74.
5. Mangrio E, Sjögren Forss K. Refugees' experiences of healthcare in the host country: a scoping review. BMC Health Services Research. 2017;17(1):814.
6. Jaeger FN, Pellaud N, Laville B, Klauser P. The migration-related language barrier and professional interpreter use in primary health care in Switzerland. BMC Health Services Research. 2019;19(1):429.
7. Papic O, Malak Z, Rosenberg E. Survey of family physicians' perspectives on management of immigrant patients: attitudes, barriers, strategies, and training needs. Patient Education and Counselling. 2012;86(2):205-9.
8. Schyve PM. Language Differences as a Barrier to Quality and Safety in Health Care: The Joint Commission Perspective. Journal of general internal medicine. 2007;22(2):360-1.
9. Bagchi AD, Dale S, Verbitsky-Savitz N, Andrecheck S, Zavotsky K, Eisenstein R. Examining Effectiveness of Medical Interpreters in Emergency Departments for Spanish-Speaking Patients With Limited English Proficiency: Results of a Randomized Controlled Trial. Annals of Emergency Medicine. 2011;57(3):248-56.e4.
10. Flores G. The Impact of Medical Interpreter Services on the Quality of Health Care: A Systematic Review. Medical Care Research and Review. 2005;62(3):255-99.
11. Lee KC, Winickoff JP, Kim MK, Campbell EG, Betancourt JR, Park ER, et al. Resident Physicians' Use of Professional and Nonprofessional Interpreters: A National Survey. JAMA. 2006;296(9):1049-54.
12. Meeuwesen L. "Language Barriers in Migrant Health Care: A Blind Spot.". Patient Education and Counselling 862 (2012): 135–136.
13. Flores G. Language barriers to health care in the United States. N Engl J Med. 2006;355(3):229-31.
14. Jacobs EA, Vela M. Reducing Language Barriers in Health Care: Is Technology the Answer? JAMA Pediatrics. 2015;169(12):1092-3.
15. Osae-Larbi JA. Bridging the language barrier gap in the health of multicultural societies: report of a proposed mobile phone-based intervention using Ghana as an example. SpringerPlus Journals. 2016;5(1):900.
16. Saha S, Fernandez A. Language barriers in health care. Journal of general internal medicine. 2007;22 Suppl 2:281-2.
17. Saohatse M. Communication problems in multilingual speech communities. South African Journal of African Languages 1998;18(4):111-7.
18. United Language Group- 5 Qualities Every Interpreter Should Have https://unitedlanguagegroupcom/blog/5-qualities-every-interpreter-should-have/ accessed 26-01-2020

[Internet].
19. Swartz L, Kilian S, Twesigye J, Attah D, Chiliza B. Language, culture, and task shifting – an emerging challenge for global mental health. Global health action. 2014;7:23433.
20. Batho Pele Principles http://www.dpsa.gov.za/documents/Abridged%20BP%20programme%20July2014.pdf accessed 26-01-2020.
21. The Constitution of South Africa 1996 https://www.justice.gov.za/legislation/constitution/SAConstitution-web-eng.pdf Accessed 26-01-2020.
22. Patients' Rights Charter https://www.westerncape.gov.za/general-publication/heres-what-you-need-know-about-patients%E2%80%99-rights-charter accessed 26-01-2020.
23. Levin ME. Overcoming language barriers. South African Medical Journal. 2006;96(10):1058-60.
24. Levin ME. The importance of language and culture in paediatric asthma care. Current Allergy and Clinical Immunology. 2005;18.
25. Levin ME. Language as a barrier to care for Xhosa-speaking patients at a South African paediatric teaching hospital. South African Medical Journal. 2006;96(10):1076-9.
26. Levin ME. Different use of medical terminology and culture-specific models of disease affecting communication between Xhosaspeaking patients and English-speaking doctors at a South African paediatric teaching hospital. South African Medical Journal. 2006;96(10):1080-4.
27. Schlemmer A, Mash B. The effects of a language barrier in a South African district hospital. South African medical Journal. 2006;96(10):1084-7.

28. Deumert A. 'It would be nice if they could give us more language'--serving South Africa's multilingual patient base. Social science & medicine (1982). 2010;71(1):53-61.
29. Hussey N. The language barrier: the overlooked challenge to equitable health care: Emerging Public Health Practitioner Awards. S Afr Health Rev. 2012; 189–195.
30. Tate RC. The Need for More Prehospital Research on Language Barriers: A Narrative Review. The western journal of emergency medicine. 2015;16(7):1094-105.
31. Tate RC, Hodkinson PW, Meehan-Coussee K, Cooperstein N. Strategies Used by Prehospital Providers to Overcome Language Barriers. Prehospital Emergency Care :. 2016;20(3):404-14.
32. Penn C. Factors affecting the success of mediated medical interviews in South Africa : review article. 2007;20(2):66-72.
33. Penn C, Koole T, Nattrass R. When seconds count: A study of communication variables in the opening segment of emergency calls. J Health Psychol. 2017;22(10):1256-64.
34. Western Cape Language Policy https://www.westerncape.gov.za/general-publication/western-cape-language-policy Accessed 19-01-2019 [
35. Van den Berg VL. Still lost in translation: language barriers in South African health care remain. South African Family Practice. 2016;58(6):229-31.
36. Benjamin E, Swartz L, Chiliza B, Hering L. Language barriers in health : lessons from the experiences of trained interpreters working in public sector hospitals in the Western Cape. South African Health Review 2016;2016(1):73-81.
37. Burch V. Cultural competence or speaking the patient's language? African Journal of Health Professions Education. 2016;8:3.
38. Docrat Z RK, Kaschula HR. How South Africa's universities are making more students multilingual https://theconversation.com/how-south-africas-universities-are-making-more-students-multilingual-116638 Accessed 26-01-2020 The Conversation Africa Inc2019 [
39. Matthews M, Van Wyk J. Speaking the language of the patient: indigenous language policy and practice. South African Family Practice. 2016;58(1):30-1.
40. P Diab MC, MFamMed; M Matthews, MB ChB, DOH, MPH; R Gokool, BA, BA Hons, MA. Medical students' views on the use of video technology in the teaching of isiZulu communication, language skills and cultural competence. African Journal of Health Professions Education. 2016;8(1.402):11-4.

41. Khoury LR. An evaluation of the use of an e-learning platform in complementing Xhosa language teaching and learning as an additional language: Univeristy of South Africa; 2015.

Part B: Manuscript in Article Format

Title page

"Language Barriers in the Emergency Centre: A survey, of doctors working in Western Cape public sector hospitals on the perceived presence and impact of language barriers"

Authors:

Nasreen Docrat, Division of Emergency Medicine, Department of Surgery, University of Cape Town, South Africa

Ana Deumert, School of African and Gender Studies, Anthropology and Linguistics, University of Cape Town, South Africa

Peter Hodkinson, Division of Emergency Medicine, Department of Surgery, University of Cape Town, Cape Town, South Africa

Corresponding author:

Dr Nasreen Docrat: ndocrat@gmail.com

Word count: 4383

Table count: 2

Figure count: 7

Language Barriers in the Emergency Centre: A survey of doctors working in Western Cape public sector hospitals on the perceived presence and impact of language barriers

Abstract

Background

Communication is vital to patient-doctor interactions especially in emergency centres (EC). It is evident from international and South African studies that language barriers result in suboptimal clinical outcomes, increased use of already limited resources and poor patient satisfaction. In the Western Cape, initiatives such as community trained interpreters, telephonic services and multilingual language policies have been implemented to improve communication between doctors and patients.

Objectives

This study was done to ascertain to what extent language barriers are perceived to still exist by doctors in emergency centres in secondary public hospitals in Cape Town.

Methods

A quantitative on-line survey of full time doctors in the ECs of six urban secondary public hospitals in Cape Town was conducted in October 2019. Data was collected over a 5 week period and covered demographics, languages spoken, (self-reported) fluency of languages spoken, languages encountered, perceived occurrence of language barriers, perceived impact of language barriers and strategies currently implemented to overcome these barriers.

Results

Of the 119 doctors invited to complete the survey, 74 eligible responses were received. Language barriers still exist in secondary public hospitals in the Western Cape. The majority of doctors spoke Afrikaans and no isiXhosa speaking doctors took part in the survey. Half of the doctors surveyed stated they would not be able to take a history in isiXhosa without an interpreter. Most (97%) of doctors had not heard of community trained interpreters and only 23% had ever used the telephone interpretation service available. Perceived consequences of language barriers include: inability or longer duration to get a history, increased use of resources, and patients returning because they did not fully understand the treatment plan. Informal interpreters such as nursing staff and family members were used most often to overcome language barriers. No official interpreters were available to assist in person and doctors are either unaware of telephonic interpreting services or woefully under-using this service. Due to language barriers, doctors are left feeling frustrated with themselves or sad for the patients that they are meant to be helping due to language barriers.

Conclusion

Reintroduction of community based interpreters, teaching doctors more languages and investment into technology-aided translation services are possibilities that have been suggested by doctors and could be researched further to help improve the current situation.

Language Barriers in the Emergency Centre: A survey, of doctors working in Western Cape public sector hospitals on the perceived presence and impact of language barriers

Introduction/Background

"Molo gqirha ndiva iintlungu ezingamandla esifubeni enye into zihla ngengalo yase kunxele ziqagamshelane nomqolo!" (*Hello doctor, I have a heavy pain in my chest, which is going down my left arm and into my back*") This presentation should get a doctor urgently ordering a bed, pain management, nitrates and an ECG. But it's unclear how much of a reaction it would get in many Cape Town Emergency Centres (EC) without an interpreter's assistance. Unfortunately, if we cannot understand our patients how can we treat them urgently as is often required in the emergency centre? Communication is vital to patient-doctor interactions, and even more so in the emergency setting.

International studies have clearly identified that language barriers in doctor-patient interactions have significant adverse outcomes.(2, 7, 8, 12, 17) It is evident from several studies that language barriers, in health care and the EC, result in altered treatment approach from doctors, suboptimal clinical outcomes, increased use of already limited resources, poor patient satisfaction and higher incidence of medical errors. (1, 2, 4, 9-13)

All government services in South Africa are guided by the Batho Pele principles.(20) These are aligned with the constitutional ideals as well as the patients' rights charter which states "a patient has the right to be given full and accurate information in order to be able to make a decision on testing or treatment and all necessary health information must be given to a patient in a language understood by the patient".(22)

Several South African studies over the last three decades have recognized discrepancies in doctors' ability to communicate with isiXhosa speaking patients in the Western Cape.(1, 23, 25, 28, 42, 43) The use of informal interpreters is common, and one study alarmingly found language incompatibility to be more of a barrier to receiving adequate care than socioeconomic factors. (25)

The Western Cape adopted a language policy in 1998 which equally recognizes English, Afrikaans, and isiXhosa in all aspects of government services including health care.(34) In 2006, a study noted that English was used in more than 80% of medical interactions and most consultations were in a patients' second or third language.(23) Deumert (28) in 2010 investigated how the health system in the Western Cape was coping with language related issues, in the face of increasing numbers of isiXhosa-speaking patients. The results were in keeping with previous studies: patients expressed dissatisfaction with doctors' inability to communicate, leaving patients feeling marginalized because they couldn't express themselves adequately. It was strongly suggested that comprehensive, professional interpreting services was required.(28)

In an attempt to address the language barriers in healthcare in the Western Cape, initiatives such as training community interpreters were initiated by the Western Cape Department of Health (WCDoH)(36). A telephonic interpretation services, called Folio Intertel Telephonic services has been made available to public sector hospitals in the Western Cape, providing telephonic translation services from 8:30am till 5:30pm for all South African languages and 27 other languages.(44) In addition many South African Universities have adapted their undergraduate health professional curricula to produce linguistically competent graduates to properly help the majority of people accessing their expertise. Each University has its' own language policy with the boldest step has been taking by the University of KwaZulu-Natal (UKZN) which implemented a policy that all graduates must learn isiZulu regardless of their degree(38).

Internationally it has been recognized that reducing the language barrier is vitally important to health care. In the Western Cape, where community trained interpreters, telephonic services and positive language policies have all been implemented, how far have we progressed? This study aims to ascertain how doctors in emergency centres in secondary public hospitals in the Cape Metropole perceive the language barriers between themselves and their patients, as well as the strategies they use to manage language mismatches in everyday consultations.

Methods

A quantitative on-line survey was conducted, using the Google Survey tool. Doctors in six urban secondary hospitals in the Cape Town metropole (New Somerset Hospital (NSH), Victoria Hospital Wynberg (VHW), Karl Bremmer Hospital (KBH), Khayelitsha Hospital (KH), Eerste River Hospital (ERH) and Mitchells Plain Hospital (MP))

participated in the survey. These hospitals were chosen as they have specialist driven ECs, and generally serve patients from predetermined surrounding geographical catchment areas, rather than a mix of distant referrals as seen at tertiary hospitals. All South African emergency consultants, registrars, medical officers, community service doctors working at the six hospital ECs were eligible to participate, but not foreign doctors such as supernumerary registrars, interns and locum doctors who likely have different or briefer experiences.

A survey was developed to address key factors based on prior research on language barriers in hospitals in the Western Cape, with input from the Linguistics Section of University of Cape Town. The survey was piloted (results not included) and modified accordingly. It comprised Likert-type questions, short answer questions and scenario-based questions to test actual practice rather than perceived fluency in different languages. Data collected covered basic demographics, information about language proficiencies, and language barriers encountered in their workplace, and finally about the perceived impact of language barriers, and commonly used strategies for overcoming language barriers. Email addresses of eligible doctors in the six hospitals were obtained from the EC heads of each unit (or they emailed the survey invite to their staff in some cases). All eligible doctors in each facility were approached via an emailed survey link which was open for a period of 5 weeks with weekly reminders. All participants took part in the online survey voluntarily and consented prior to beginning the survey. Participants were assured of the confidentiality of their input, with all responses anonymized by the survey tool. There was no financial reimbursement for any participants. Some results were followed up with personal communications with EC heads to clarity.

Approval to conduct the study was obtained from the Human Research Ethics Committee at the University of Cape Town (HREC 315/2019) and from the National Health Research Database (NHRD) and hospital managers.

Data was captured into Microsoft Excel spreadsheets and analysed and reported using standard descriptive statistics and graphics.

Results

Demographics of sample

A total of 119 doctors from six secondary public sector hospitals in the Cape Town metropole were emailed with an invitation to complete the survey over a 5 week period in October-November 2019. Seventy five responses were received (65.3% response rate). One survey response was excluded (intern not eligible to participate). There were similar numbers of doctors participating from each hospital (all with similar staff numbers) (Table 1). On average, the doctors had been working in an EC for 4.7 years (ranging from half a year to 22 years). The majority of doctors spoke Afrikaans as their home language, and the balance English, with no home language isiXhosa speaking doctors surveyed.

Table 1. Demographics of Participants (Doctors)

	n	%
Hospital working at		
Eerste Rivier	14	19
Karl Bremmer	6	8
Khayelitsha	11	15
Mitchell's Plain	17	23
New Somerset	17	23
Victoria	9	12
Home language		
English	34	46
Afrikaans	40	54
isiXhosa	0	0
Length of time working in current EC		
Less than 3 months	5	7
3-6 months	11	15
6 months - 1 year	17	23

Greater than 1 year	41	55
Current qualification		
Community Service	17	23
Family Physician	3	4
Emergency Medicine Consultant	10	14
Emergency Medicine Registrar	6	8
Family Medicine Registrar	2	3
Medical Officer	36	49

Languages spoken by patients

As reported by the doctors, Khayelitsha Hospital had a predominantly isiXhosa speaking patient population (91%), Eerste Rivier Hospital a predominantly Afrikaans speaking patient group (58%), whereas the other four hospitals seem to be mixed (Figure 1). Doctors also reported encountering languages other than the three official languages of the Western Cape (Table 2).

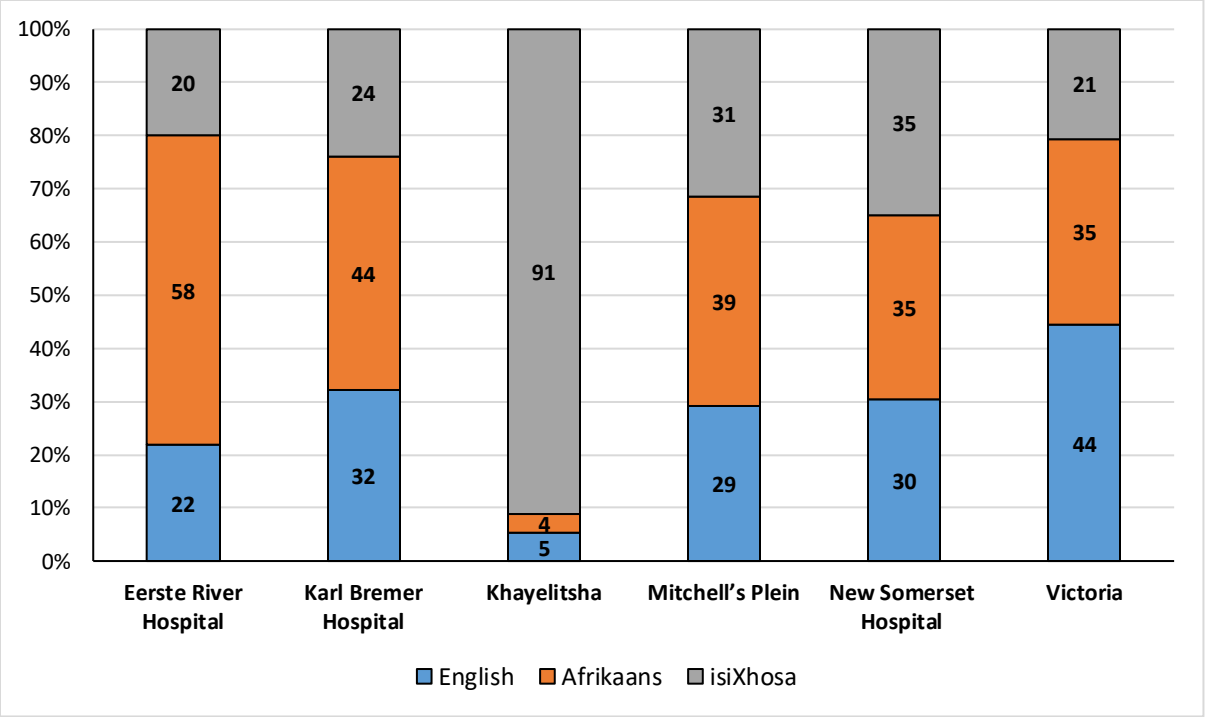


Figure 1. Language predominantly spoken by patients at each Emergency Centre as reported/ perceived by doctors

Table 2. Languages encountered by doctors other than 3 official language of the Western Cape

South African Languages	N	Other Languages	N
Sepedi	1	French	42
Sesotho	9	Shona	22
Setswana	4	Arabic/ Somali (Somalia)	18
Xitsonga	2	Chichewa	7
isiZulu	17	Lingala	3
		German	3
		Mandarin	4
		Portuguese	13
		Kiswahili	8
		Other African Languages*	6

** Other (5 not specified, 1 Oshiwambo)*

Language barriers

Of the 52 doctors that were interviewed for their current position (others were allocated to hospitals without interview), only 31% (n = 23) of doctors were asked about their ability to communicate in the languages of patients attending their hospital (the majority of these were medical officers, n = 18).

When asked how often they encountered a situation in which they were unable to communicate independently with a patient, over half 55% (n=41) said sometimes, almost one-third stated (n=22) rarely, and 14% (n=10) stated often (Figure 2). Noticeably in Khayelitsha, where the predominant language spoken is isiXhosa , the majority of doctors (55%, n=6), reported encountering situations where they were unable to communicate with patients more than 3 times a shift. All the doctors surveyed at Khayelitsha hospital encountered a situation where they were unable to communicate independently with a patient at least once on every shift.

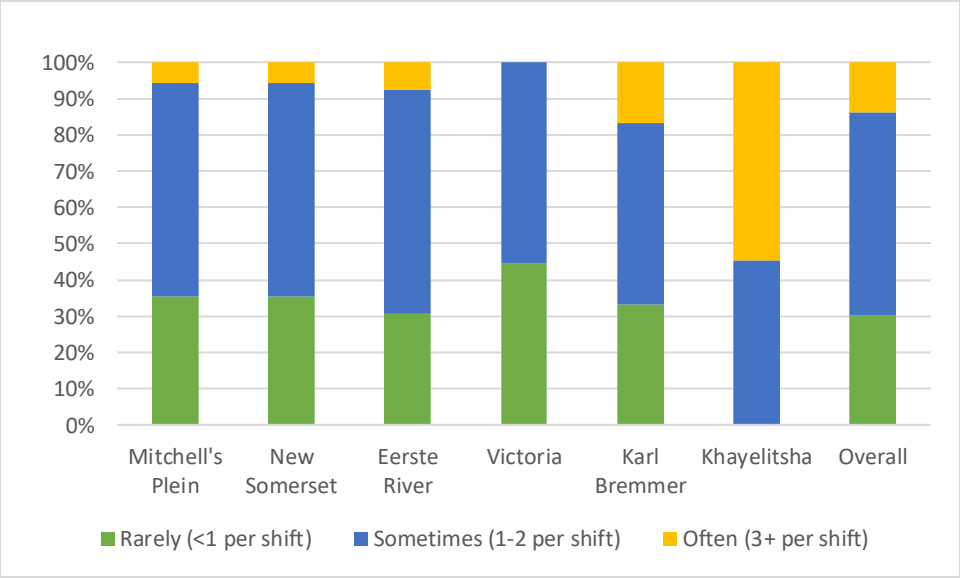


Figure 2 How often doctors are unable to communicate with patients

Nearly all doctors felt able to obtain a history, explain a differential diagnosis, explain tests/images, obtain informed consent, explain the next step and explain prognosis in English (>90%). A majority (>50%) also felt able to do so in Afrikaans, whereas for isiXhosa, none of the doctors reported being fully able to complete any of these tasks in the EC (Figure 3). Half (n=37) of the doctors reported not being able to take a history at all in isiXhosa and 70% of doctors

could not complete the other 5 tasks in isiXhosa at all. In comparison less than 5% of doctors reported not being able to complete any of these 6 tasks in Afrikaans, and 0% in English.

Figure 3. Doctors perceived ability to perform routine emergency consultation tasks in the three official languages.

In Eerste River Hospital, Afrikaans was the predominant language of patients, and 79% (n=11) of doctors at this facility felt they were fully able to communicate with their patients. No doctors felt unable to communicate at all. In Khayelitsha Hospital, where isiXhosa was the predominant language, none of the doctors felt confident in being able to fully communicate with their patients. Only when taking a history did 64% (n=7) of doctors feel they would be able to communicate somewhat with their patients.

Language services

Of the 74 responses, 88% (n = 65) of doctors were aware that the Western Cape recognizes English, Afrikaans and isiXhosa as official languages of communication for all government services including health services. Just over half (51%; n = 38) of the doctors were aware of the telephonic interpreter service "Folio InterTel Telephonic Interpreting" (Folio) provided by the Western Cape Department of Health, and almost half (47%; n = 35) of doctors stated that Folio was available at their EC. Of the 38 who had heard of Folio, 61% had never used it, 16% found it 'good 'at improving communication, 13% found it 'okay' at improving communication, 8% thought it was not helpful at improving communication, and 3% found it extremely tedious. Reasons cited for Folio not being helpful included early closing times, the phone number not working, lack of visibility of the service, and difficulty getting a patient to the phone to use the service. Of the doctors who hadn't heard of Folio, 75% (n=56) wanted to know more about the service and would be willing to use the service.

Only 7% (n = 5) were aware of the hospital-based community-trained interpreters provided by the Western Cape DOH (none of the doctors had used these interpreters before), and none knew if this service was available at their EC. Of those not aware of hospital-based community-trained interpreters, 38% (n=28) would be willing to use the service, and 62% (n=46) wanted to know more about the service and would be willing to use the service. Doctors across all sites reported having no dedicated interpreters in their EC.

Consequences of language barriers

Doctors felt that language barriers impact negatively and result in more resources being used in most cases, with inability or longer duration to get a history, and patients returning because they did not fully understand the treatment plan. (Figure 4).

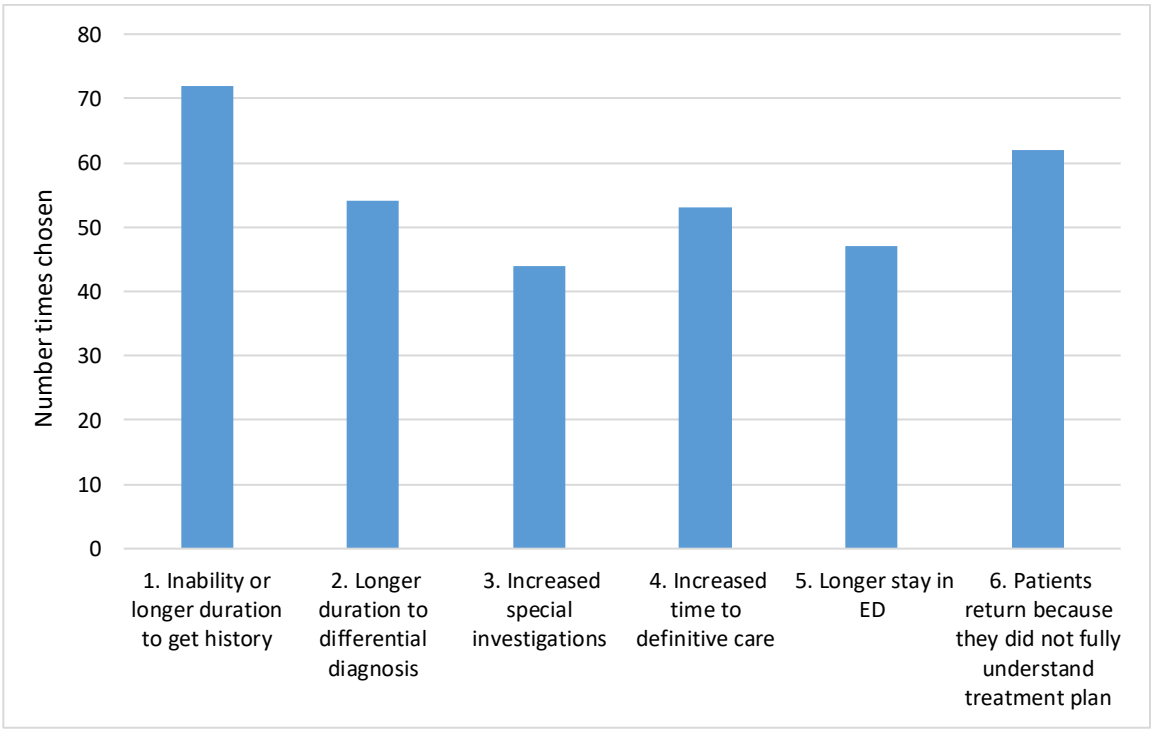


Figure 4. Consequences of language barriers.

Language barriers left doctors feeling frustrated, sad and angry (Figure 5) with all doctors reporting that language barriers are an important topic.

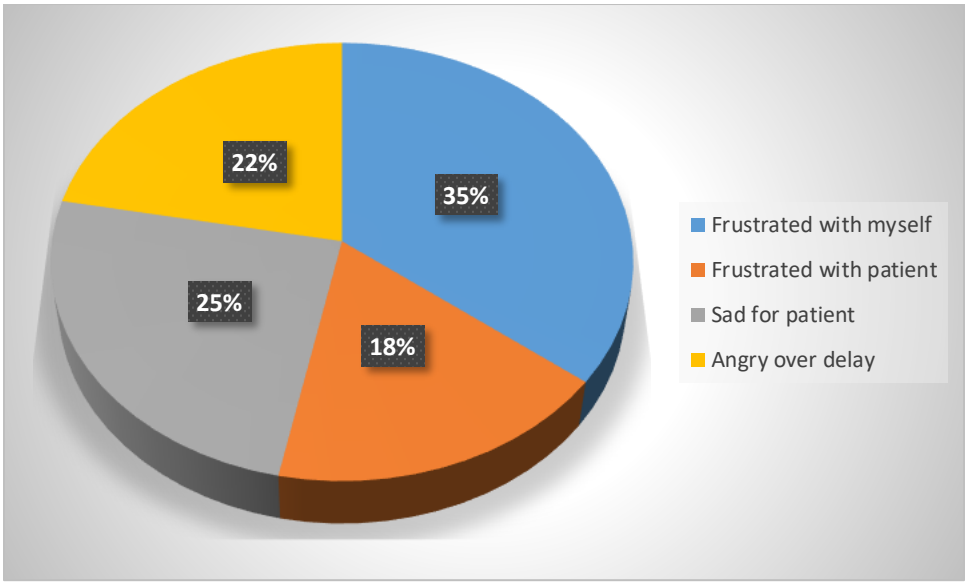
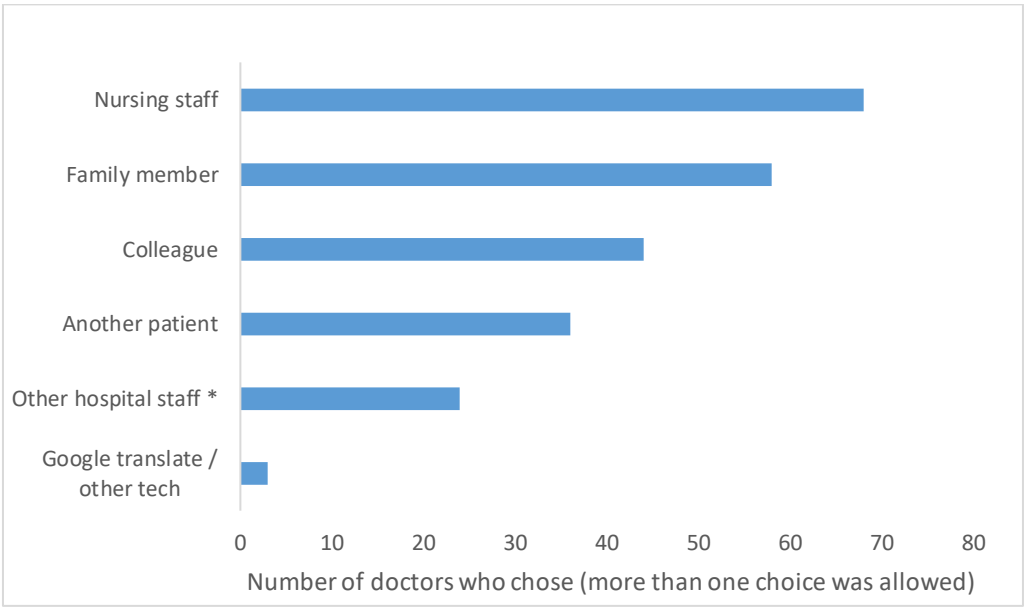


Figure 5. How doctors feel when unable to communicate effectively with a patient

Current strategies and recommended strategies

To assist with translation doctors report using medical personnel, family members, hospital support staff, other patients and multiple forms of technology such as google translate. (Figure 6)



*Other (admin staff, cleaners, porters and security guards)

Figure 6 Strategies recommended by doctors to assist with translation

The majority of doctors, 78% (n=58) across all 6 facilities felt that a full-time interpreter on site for the three major languages of the Western Cape was the best solution to overcoming language barriers (Figure 7). As a second option 'language training for doctors' or 'technology aided devices to assist with translation' was almost equally favoured by 38% (n=28) and 36% (n=27) respectively.

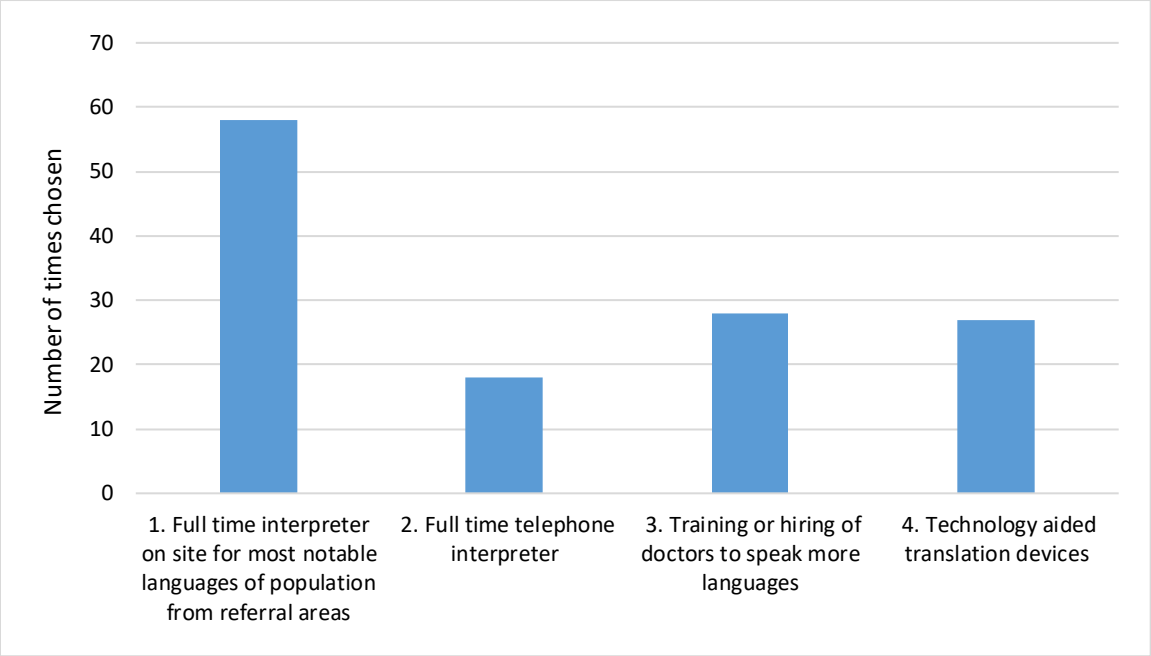


Figure 7. Possible interventions to improve language barriers.

Discussion

Doctors in secondary public hospitals in the Cape Town metropole still perceive language to be a frequent barrier between themselves and their patients. Our findings are in keeping with previous studies which show that language barriers increased resource use, increased time in the EC and resulted in poor patient satisfaction (2, 18, 45, 46). Language is clearly still a barrier in this setting, affecting not only patient care and satisfaction but also doctors' outlooks. In busy EC's with long waiting times, and patients in need of urgent medical care, doctors are already under a lot of pressure and delays in the system result in longer wait times and greater work load.(47).

Many studies show that the use of informal interpreters, clearly prevalent in these ECs, results in negative consequences such as misinterpretation and miscommunication and does not improve patient care in the face of language barriers (1, 4, 6, 7, 9-11, 14, 15, 18, 43, 48). The use of professional interpreters in high income countries has resulted in a reduction of unnecessary tests, treatments, improved adherence, reduced hospital stay, or need for admissions/ readmission (11, 18). Nurses are most often used to help translate which has been shown not to be an appropriate solution. In two studies in the Western Cape nurses revealed that they had negative feelings towards doctors who felt it was okay to ask them to interpret(1, 27). They also felt they had no choice in interpreting, no recognition for it by the doctors, and no remuneration as it was an additional task to their already busy workload (1, 27). Hussey (29) agreed, pointing out that overworked nurses are not suitable to address the problem because "communication can become time consuming, which increases frustration levels and decreases empathy, approachability and confidentiality". He concluded that multilingual education, as a part of professional training, and trained interpreters were required. Yet in our study doctors reported using nursing staff 92% (n=68) of the time to assist with interpretation, followed by family members 78% (n=58) of the time. If nurses or family members are being used as translators it raises major ethical dilemmas regarding patient confidentiality and patient rights, thus suggesting that there are still significant issues in providing adequate services to deal with language barriers in secondary public hospitals in the Western Cape.(1, 11, 18, 27)

In 2011, the Western Cape Department of Health initiated a community trained interpreter service, with fifteen individuals receiving a three-day training course, after which they were placed in six Western Cape Public hospitals as intern interpreters. (36) From early on it was evident that major problems existed with the program as only nine individuals remained six months after the program. Based on our study not a single community based interpreter was available at any of the surveyed facilities and 97% doctors had never even heard of the service. This program may prove to be worth-while and a majority of doctors surveyed stated they would like to know more about this service.(36)

A study by Tate et al (31) explored communication strategies for emergency call centre personnel in the Western Cape (South Africa) when they were challenged by language barriers. Tele-communicators across the study noted 3rd party telephonic interpreters as being a useful strategy. Currently in the Western Cape "Folio" telephonic interpretation services are available to all public hospitals, yet only half of the doctors who participated in the survey were aware of it and of those only a third of them had used it. This service is underutilized and awareness of the services needs to be prioritized (this study has made many who took part aware of the service and future studies could expand on how well this service works once doctors are aware of its existence).

Language barriers occur more often when a disparity exists between the home language of doctors and patients(28). There were no home language isiXhosa speaking doctors who completed the survey. On further enquiry to each of the 6 facilities, heads of departments at five facilities reported that they had no isiXhosa home language doctors working in their EC at the time of the study and one facility who had one part time MO [Personal Communications EC Heads of Department March 2020]. This was reflected in our results which showed half of doctors serving a predominately isiXhosa speaking population could not take a medical history without some interpretation assistance and even more could not explain a differential diagnosis, obtain informed consent, explain the prognosis or explain the next step in care without interpretation. It is significant that none of these facilities had full time isiXhosa-speaking doctors working in their EC's considering that the Western Cape has accepted isiXhosa as an official language of the province. Where are we falling short, and what can be done?

A study in 2016, noted that most medical students in SA were black (38.7%), followed by white (33.0%), coloured (13.4%) and Indian/Asian (13.6%). Still at the time the number of black students was proportionately lower than the general population(50). Perhaps the best place to start is for selection policies to include language proficiency as one of the criteria to ensure future doctors are able to serve the needs of those they will be helping.

There has been a push towards health care professionals to be culturally competent, that is, to learn a set of attitudes and communication skills that allow them to be sensitive to the culture of their patients, and Burch(37) argues that in order to be culturally competent as professionals, language must be systematically addressed in medical institutions. English remains the dominant language in South African universities, despite the fact that it is only the sixth most spoken home language across the country(38). South African Universities are aware that graduates need to be more linguistically competent to properly help the majority of people accessing their expertise whose proficiency in English is limited. (37) Our survey highlighted that many doctors would be willing to learn more languages to improved communication with their patients.

With universities implementing language policies, Mathews et al (39) showed that in third year UKZN students (with mandatory isiZulu courses) communication skills had improved, and they had a positive attitude to learning isiZulu and rated their competence of the language higher. However, their ability to communicate with patients had not improved sufficiently for it to be used practically. This raises many questions - if brief undergraduate interventions are not showing a real life impact when seeing patients, where are the meaningful solutions, and how do we pack these into already crammed curricula? Language learning requires significant investment, and could arguably be better addressed by schools and at home. Time-investment is needed for successful second language acquisition. Without immersion the number of hours taught in undergraduate programs are simply not enough and it is practice and use that is necessary for success. In many ways this speaks to the legacy of apartheid and the fact that we are still divided in so many ways.

In order to best serve patients, perhaps we need a system that better matches doctors assigned to a hospital or hired for a post with the languages of their patients. Enquiring about a doctors' language competency should be part of any interview process, and could help alleviate some of the problems and help motivate doctors to learn more languages to improve employment opportunities. Possibly implementing a system to ensure that at least a certain number of doctors in any given EC speak the home language of the majority of patients attending that hospital could be a start?

As we have shown, it is not just patients who suffer the consequences of language barriers but doctors feeling frustrated, angry and over worked could lead to more doctors joining the private sector or immigrating thus further exacerbating the situation where doctors, trained up at considerable state expense, are not retained in the public sector (51, 52).

When asked for solutions, most doctors want full time interpreters who speak the three official languages of the Western Cape. Based on this, relooking at trained community based interpreters could possibly be a start to improving

the situation. With a heavy workload and tough working conditions only a third of doctors stated that they would be willing to learn more languages if necessary. This, however, would not be required if early language immersion and appropriate undergraduate programs were in place and if doctors were allocated to hospitals in which they could already communicate with the majority of the patient population.

Strengths and Limitations

This study builds on previously conducted studies, in order to identify if there has been an improvement in the language mismatch between patients and doctors, particularly in the emergency setting. It included hospitals in varying demographic regions around Cape Town, including areas with varying languages usage. The number of doctors participating was small, but we believe this was a good response rate for an online survey, and broadly representative of public sector doctors working in Cape Town ECs. An online survey was a low cost option which allowed busy emergency physicians to respond in their own time and resulted in a relatively high response rate. Thus resulting in a higher degree of reliability and validity. The study only represents secondary hospitals in Cape Town and explored retrospective perceptions of only doctors. The study did not ask about language learnt as a student and newer language programs implemented at medical school may result in improved communication skills of newly graduated doctors. It does not include other hospital staff or patients. Further studies into patient's perceptions of the language barrier and current translations services are required. Cape Town metropole's demographics vary greatly from other regions in the Western Cape and South Africa and as such these results may not be generalizable. However, similar language barriers are likely widespread around the country, with doctors who speak the African majority languages still a minority despite rapidly evolving demographics.

Conclusion

Communication is vital for productive patient-doctor interactions and although the Western Cape Department of Health has adopted measures to improve language barriers between doctors and patients, this remains an important and unresolved issue in the EC. Doctors report that language barriers increase resource use, increase time in the EC and result in poor patient satisfaction which is in keeping with previous international and South African studies. Our results highlight the persistence of significant language barriers, particularly for isiXhosa speaking patients, with no official interpreters available to assist. Reintroduction of community trained interpreters, better language teaching through social interactions, educational opportunities, and investment into technology aided translation services are all options that need urgent investigation to help improve the current situation.

References

1. Hampers LC, Cha S, Gutglass DJ, Binns HJ, Krug SE. Language barriers and resource utilization in a pediatric emergency department. Pediatrics. 1999;103(6 Pt 1):1253-6.
2. Meeuwesen L. "Language Barriers in Migrant Health Care: A Blind Spot.". Patient Education and Counselling 862 (2012): 135–136.
3. Papic O, Malak Z, Rosenberg E. Survey of family physicians' perspectives on management of immigrant patients: attitudes, barriers, strategies, and training needs. Patient Education and Counselling. 2012;86(2):205-9.
4. Schyve PM. Language Differences as a Barrier to Quality and Safety in Health Care: The Joint Commission Perspective. Journal of general internal medicine. 2007;22(2):360-1.
5. Swartz L, Kilian S, Twesigye J, Attah D, Chiliza B. Language, culture, and task shifting – an emerging challenge for global mental health. Global health action. 2014;7:23433.
6. Bagchi AD, Dale S, Verbitsky-Savitz N, Andrecheck S, Zavotsky K, Eisenstein R. Examining Effectiveness of Medical Interpreters in Emergency Departments for Spanish-Speaking Patients With Limited English Proficiency: Results of a Randomized Controlled Trial. Annals of Emergency Medicine. 2011;57(3):248-56.e4.
7. Crawford A. "We can't all understand the whites' language": an analysis of monolingual health Services in a multilingual society. International Journal of the Sociology of Language. 1999;136(1).
8. Flores G. The Impact of Medical Interpreter Services on the Quality of Health Care: A Systematic Review. Medical Care Research and Review. 2005;62(3):255-99.
9. Flores G. Language barriers to health care in the United States. N Engl J Med. 2006;355(3):229-31.
10. Jacobs EA, Lauderdale DS, Meltzer D, Shorey JM, Levinson W, Thisted RA. Impact of interpreter services on delivery of health care to limited-English-proficient patients. Journal of general internal medicine. 2001;16(7):468-74.
11. Lee KC, Winickoff JP, Kim MK, Campbell EG, Betancourt JR, Park ER, et al. Resident Physicians' Use of Professional and Nonprofessional Interpreters: A National Survey. JAMA. 2006;296(9):1049-54.
12. Batho Pele Principles http://www.dpsa.gov.za/documents/Abridged%20BP%20programme%20July2014.pdf accessed 26-01-2020.
13. Patients' Rights Charter https://www.westerncape.gov.za/general-publication/heres-what-you-need-know-about-patients%E2%80%99-rights-charter accessed 26-01-2020.
14. Deumert A. 'It would be nice if they could give us more language'--serving South Africa's multilingual patient base. Social science & medicine (1982). 2010;71(1):53-61.
15. Levin ME. Language as a barrier to care for Xhosa-speaking patients at a South African paediatric teaching hospital. South African Medical Journal. 2006;96(10):1076-9.
16. Levin ME. Overcoming language barriers. South African Medical Journal. 2006;96(10):1058-60.
17. Schlemmer A, Mash B. The effects of a language barrier in a South African district hospital. S Afr Med J. 2006;96(10):1084-7.
18. Flores G, Abreu M, Schwartz I, Hill M. The importance of language and culture in pediatric care: Case studies from the Latino community. The Journal of pediatrics. 2001;137:842-8.
19. Western Cape Language Policy https://www.westerncape.gov.za/general-publication/western-cape-language-policy Accessed 19-01-2019 [
20. Benjamin E, Swartz L, Chiliza B, Hering L. Language barriers in health : lessons from the experiences of trained interpreters working in public sector hospitals in the Western Cape. South African Health Review 2016;2016(1):73-81.
21. Folio InterTel Telephoinc Interpreting https://www.folio-online.co.za/#intertel accessed June 2019.
22. Docrat Z RK, Kaschula HR. How South Africa's universities are making more students multilingual https://theconversation.com/how-south-africas-universities-are-making-more-students-multilingual-116638 Accessed 26-01-2020 The Conversation Africa Inc2019 [
23. Shelmerdine S. Pathways to Inhumane Care: Medical Culture in a South African Emergency Unit. Masters Thesis: University of Cape Town; 2011.
24. Carrasquillo O, Orav EJ, Brennan TA, Burstin HR. Impact of language barriers on patient satisfaction in an emergency department. Journal of Gen Internal Medicine. 1999;14(2):82-7.
25. Saohatse M. Communication problems in multilingual speech communities. South African Journal of African Languages 1998;18(4):111-7.
26. Rossouw L, Seedat S, Emsley R, Suliman S, Hagemeister D. The prevalence of burnout and depression in medical doctors working in the Cape Town Metropolitan Municipality community healthcare clinics and district

hospitals of the Provincial Government of the Western Cape: A cross-sectional study. South African Family Practice. 2014;55:567-73.
27. Jacobs EA, Vela M. Reducing Language Barriers in Health Care: Is Technology the Answer? JAMA Pediatrics. 2015;169(12):1092-3.
28. Jaeger FN, Pellaud N, Laville B, Klauser P. The migration-related language barrier and professional interpreter use in primary health care in Switzerland. BMC Health Services Research. 2019;19(1):429.
29. Osae-Larbi JA. Bridging the language barrier gap in the health of multicultural societies: report of a proposed mobile phone-based intervention using Ghana as an example. SpringerPlus Journals. 2016;5(1):900.
30. Saha S, Fernandez A. Language Barriers in Health Care. Journal of general internal medicine. 2007;22(2):281-2.
31. Schlemmer A, Mash B. The effects of a language barrier in a South African district hospital. South African medical Journal. 2006;96(10):1084-7.
32. Hussey N. The language barrier: the overlooked challenge to equitable health care: Emerging Public Health Practitioner Awards. South African Health Review . 2012; 189–195.
33. Tate RC, Hodkinson PW, Meehan-Coussee K, Cooperstein N. Strategies Used by Prehospital Providers to Overcome Language Barriers. Prehospital Emergency Care :. 2016;20(3):404-14.
34. Tumbo JM, Couper ID, Hugo JFM. Rural-origin health science students at South African universities South African Medical Journal. 2009;99:54-6.
35. van der Merwe LJ, van Zyl GJ, St Clair Gibson A, Viljoen M, Iputo JE, Mammen M, et al. South African medical schools: Current state of selection criteria and medical students' demographic profile. South African Medical Journal. 2016;106:76-81.
36. Burch V. Cultural competence or speaking the patient's language? African Journal of Health Professions Education. 2016;8:3.
37. Matthews M, Van Wyk J. Speaking the language of the patient: indigenous language policy and practice. South African Family Practice. 2016;58(1):30-1.
38. George A, Blaauw D, Thompson J, Green-Thompson L. Doctor retention and distribution in post-apartheid South Africa: tracking medical graduates (2007–2011) from one university. Human Resources for Health. 2019;17(1):100.
39. Tankwanchi AS, Hagopian A, Vermund SH. International migration of health labour: monitoring the two-way flow of physicians in South Africa. BMJ Global Health. 2019;4(5):e001566.

Part C: Addenda

Appendix 1: South African Medical Journal: Instructions for authors

The South African Medical Journal was selected for publication. The article relates to South African emergency centres specifically in the Western Cape. It may be used by other institutions in South Africa to further research on how to bridge the language barrier. The South African Medical Journal is an open access journal and would allow wide access of the findings even beyond South African borders.

The Instructions for authors can be found at the following link:

http://www.samj.org.za/index.php/samj/about/submissions#Research

Appendix 2: Ethics Approval

UNIVERSITY OF CAPE TOWN
Faculty of Health Sciences
Human Research Ethics Committee

Room E53-46 Old Main Building
Groote Schuur Hospital
Observatory 7925
Telephone [021] 406 6626
Email: shuretta.thomas@uct.ac.za
Website: www.health.uct.ac.za/fhs/research/humanethics/forms

05 August 2019

HREC REF: 315/2019

A/Prof P Hodkinson
Emergency Medicine
F51, OMB

Dear A/Prof Hodkinson

PROJECT TITLE: LANGUAGE BARRIERS IN THE EMERGENCY CENTRE (EC): A SURVEY, OF SECONDARY PUBLIC HOPITAL EC DOCTORS ON THE PRESENCE AND IMPACT OF LANGUAGE BARRIERS (MPHIL CANDIDATE: DR N DOCRAT)

Thank you for submitting your response to the Faculty of Health Sciences Human Research Ethics Committee.

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study.

Approval is granted for one year until the 30 August 2020.

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.
(Forms can be found on our website: www.health.uct.ac.za/fhs/research/humanethics/forms)

Please quote the HREC REF in all your correspondence.

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please note that for all studies approved by the HREC, the principal investigator **must** obtain appropriate institutional approval, where necessary, before the research may occur.

The HREC acknowledge that the student, Nasreen Docrat will also be involved in this study.

Yours sincerely

Signature removed

PROFESSOR M BLOCKMAN
CHAIRPERSON, FHS HUMAN RESEARCH ETHICS COMMITTEE
Federal Wide Assurance Number: FWA00001637.
Institutional Review Board (IRB) number: IRB00001938
This serves to confirm that the University of Cape Town Human Research Ethics Committee complies to the Ethics Standards for Clinical Research with a new drug in patients, based on the Medical

Appendix 3: NHRD Approval

Health Impact Assessment
Health Research sub-directorate
Health.Research@westerncape.gov.za
tel: +27 21 483 0866; fax: +27 21 483 9895
5th Floor, Norton Rose House, 8 Riebeek Street, Cape Town, 8001
www.capegateway.gov.za)

REFERENCE: WC_201908_039
ENQUIRIES: Dr Sabela Petros

University of Cape Town
Anzio Road
Observatory
Cape Town
7925

For attention: **DR Nasreen Docrat, PROF Peter Hodkinson, PROF Ana Deumert**

Re: **Language Barriers in the Emergency Centre (EC): A survey, of secondary public hospital EC doctors on the perceived presence and impact of language barriers**

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research. Please contact the following person to assist you with any further enquiries in accessing the following sites:

Karl Bremer Hospital	**Leilah Najjaar**	**021 815 8865**
Eerste River Hospital	**Dr Adele Anthony**	**021 902 8019**

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. By being granted access to provincial health facilities, you are expressing consent to provide the department with an electronic copy of the final feedback (**annexure 9**) within six months of completion of your project. This can be submitted to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
3. In the event where the research project goes beyond the estimated completion date which was submitted, researchers are expected to complete and submit a progress report (**Annexure 8**) to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
4. The reference number above should be quoted in all future correspondence.

Yours sincerely

Dr Melvin Moodley
Director: Health Impact Assessment
02 OCT 2019

DR M MOODLEY
DIRECTOR: HEALTH IMPACT ASSESSMENT
DATE:
CC

Signature Removed

Western Cape Government
Health

Health Impact Assessment
Health Research sub-directorate
Health.Research@westerncape.gov.za
tel: +27 21 483 0866; fax: +27 21 483 9895
5th Floor, Norton Rose House, 8 Riebeek Street, Cape Town, 8001
www.capegateway.gov.za

REFERENCE: WC_201908_039
ENQUIRIES: Dr Sabela Petros

University of Cape Town
Anzio Road
Observatory
Cape Town
7925

For attention: **DR Nasreen Docrat, PROF Peter Hodkinson, PROF Ana Deumert**

Re: **Language Barriers in the Emergency Centre (EC): A survey, of secondary public hospital EC doctors on the perceived presence and impact of language barriers**

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research. Please contact the following person to assist you with any further enquiries in accessing the following sites:

New Somerset Hospital	**Dr Donna Stokes**	**021 402 6504**
Mitchells Plain Hospital	**Dr Jacek Marszalek**	**021 377 4782**

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. By being granted access to provincial health facilities, you are expressing consent to provide the department with an electronic copy of the final feedback (**annexure 9**) within six months of completion of your project. This can be submitted to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
3. In the event where the research project goes beyond the estimated completion date which was submitted, researchers are expected to complete and submit a progress report (**Annexure 8**) to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
4. The reference number above should be quoted in all future correspondence.

Yours sincerely

Signature Removed

DR M MOODLEY
DIRECTOR: HEALTH IMPACT ASSESSMENT
DATE: 5/11/2019
CC

Western Cape Government
Health

Health Impact Assessment
Health Research sub-directorate
Health.Research@westerncape.gov.za
tel: +27 21 483 0866; fax: +27 21 483 9895
5th Floor, Norton Rose House, 8 Riebeek Street, Cape Town, 8001
www.capegateway.gov.za

REFERENCE: WC_201908_039
ENQUIRIES: Dr Sabela Petros

University of Cape Town
Anzio Road
Observatory
Cape Town
7925

For attention: **DR Nasreen Docrat, PROF Peter Hodkinson, PROF Ana Deumert**

Re: **Language Barriers in the Emergency Centre (EC): A survey, of secondary public hospital EC doctors on the perceived presence and impact of language barriers**

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research. Please contact the following person to assist you with any further enquiries in accessing the following sites:

Khayelitsha Hospital	**Kitesh Moodley**	**021 360 4500**

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. By being granted access to provincial health facilities, you are expressing consent to provide the department with an electronic copy of the final feedback (**annexure 9**) within six months of completion of your project. This can be submitted to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
3. In the event where the research project goes beyond the *estimated completion* date which was submitted, researchers are expected to complete and submit a progress report (**Annexure 8**) to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
4. The reference number above should be quoted in all future correspondence.

Yours sincerely

DR M MOODLEY
DIRECTOR: HEALTH IMPACT ASSESSMENT
DATE:
CC

Dr Melvin Moodley
Director: Health Impact Assessment
14 NOV 2019

Signature Removed

Western Cape Government
Health

Health Impact Assessment
Health Research sub-directorate
Health.Research@westerncape.gov.za
tel: +27 21 483 0866; fax: +27 21 483 9895
5th Floor, Norton Rose House, 8 Riebeek Street, Cape Town, 8001
www.capegateway.gov.za

REFERENCE: WC_201908_039
ENQUIRIES: Dr Sabela Petros

University of Cape Town
Anzio Road
Observatory
Cape Town
7925

For attention: **DR Nasreen Docrat, PROF Peter Hodkinson, PROF Ana Deumert**

Re: **Language Barriers in the Emergency Centre (EC): A survey, of secondary public hospital EC doctors on the perceived presence and impact of language barriers**

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research. Please contact the following person to assist you with any further enquiries in accessing the following sites:

Victoria Hospital	**Dr Graeme Dunbar**	**021 799 1211**

Kindly ensure that the following are adhered to:

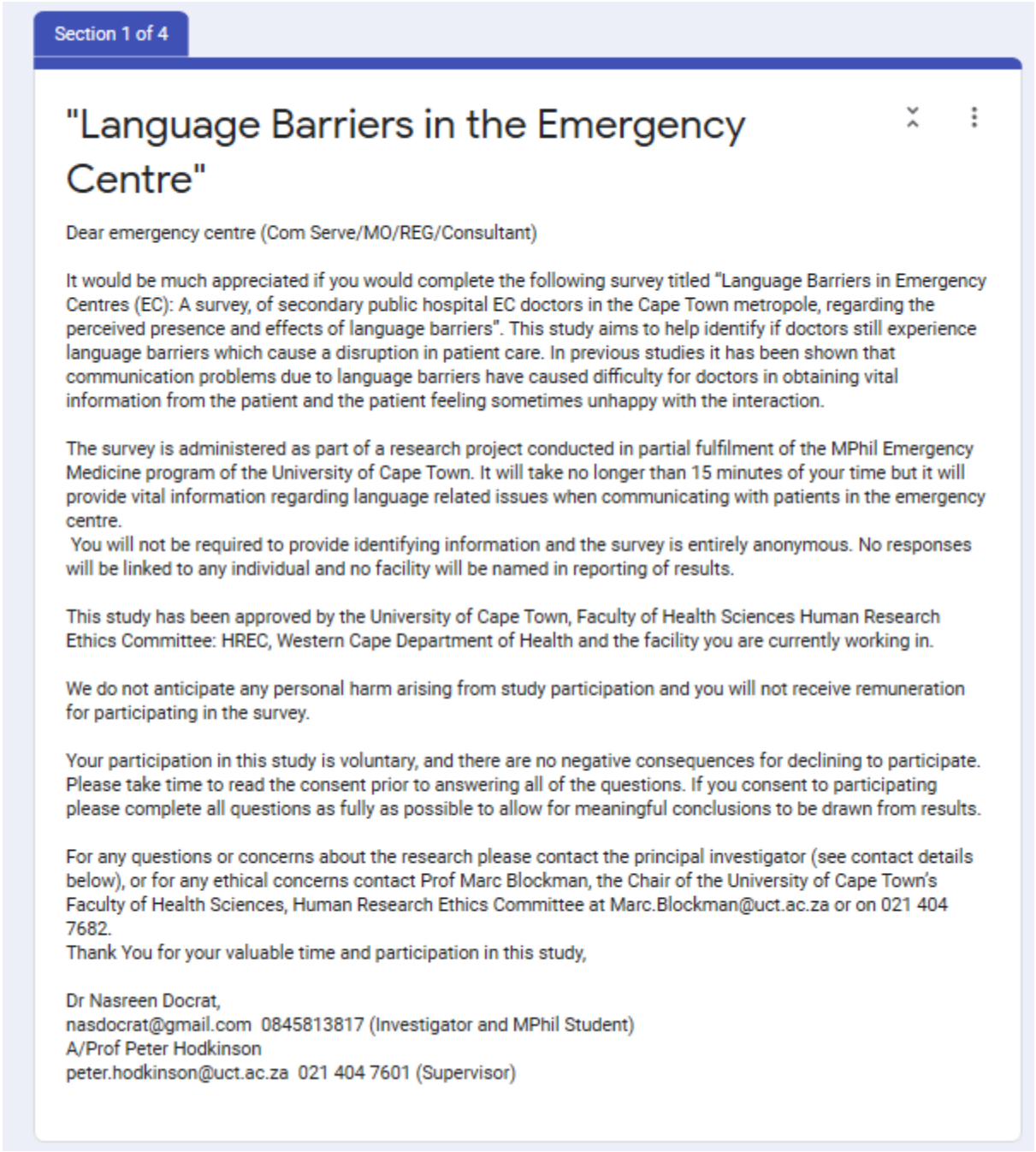
1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. By being granted access to provincial health facilities, you are expressing consent to provide the department with an electronic copy of the final feedback (**annexure 9**) within six months of completion of your project. This can be submitted to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
3. In the event where the research project goes beyond the *estimated* completion date which was submitted, researchers are expected to complete and submit a progress report (**Annexure 8**) to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
4. The reference number above should be quoted in all future correspondence.

Yours sincerely

Signature Removed

DR M MOODLEY
DIRECTOR: HEALTH IMPACT ASSESSMENT
DATE: 25/02/2020
CC

Appendix 4: Survey



Section 1 of 4

"Language Barriers in the Emergency Centre"

Dear emergency centre (Com Serve/MO/REG/Consultant)

It would be much appreciated if you would complete the following survey titled "Language Barriers in Emergency Centres (EC): A survey, of secondary public hospital EC doctors in the Cape Town metropole, regarding the perceived presence and effects of language barriers". This study aims to help identify if doctors still experience language barriers which cause a disruption in patient care. In previous studies it has been shown that communication problems due to language barriers have caused difficulty for doctors in obtaining vital information from the patient and the patient feeling sometimes unhappy with the interaction.

The survey is administered as part of a research project conducted in partial fulfilment of the MPhil Emergency Medicine program of the University of Cape Town. It will take no longer than 15 minutes of your time but it will provide vital information regarding language related issues when communicating with patients in the emergency centre.
You will not be required to provide identifying information and the survey is entirely anonymous. No responses will be linked to any individual and no facility will be named in reporting of results.

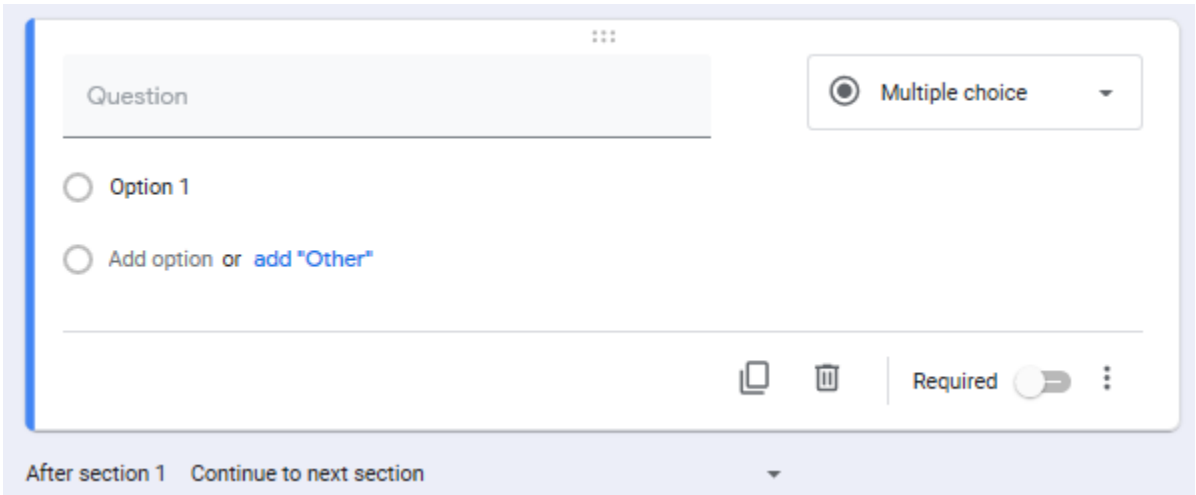
This study has been approved by the University of Cape Town, Faculty of Health Sciences Human Research Ethics Committee: HREC, Western Cape Department of Health and the facility you are currently working in.

We do not anticipate any personal harm arising from study participation and you will not receive remuneration for participating in the survey.

Your participation in this study is voluntary, and there are no negative consequences for declining to participate. Please take time to read the consent prior to answering all of the questions. If you consent to participating please complete all questions as fully as possible to allow for meaningful conclusions to be drawn from results.

For any questions or concerns about the research please contact the principal investigator (see contact details below), or for any ethical concerns contact Prof Marc Blockman, the Chair of the University of Cape Town's Faculty of Health Sciences, Human Research Ethics Committee at Marc.Blockman@uct.ac.za or on 021 404 7682.
Thank You for your valuable time and participation in this study,

Dr Nasreen Docrat,
nasdocrat@gmail.com 0845813817 (Investigator and MPhil Student)
A/Prof Peter Hodkinson
peter.hodkinson@uct.ac.za 021 404 7601 (Supervisor)



Section 2 of 4

CONSENT

Description (optional)

1. I confirm I have read and understand the information sheet regarding the study "Language Barriers in Emergency Centres (EC): A survey, of secondary public hospital EC doctors in the Cape Town metropole, regarding the perceived presence and effects of language barriers" *

- YES
- NO

2. I understand participation is voluntary and anonymous and that I am free to withdraw without consequences at any time *

- Yes
- NO

3. I agree to take part in the above study (If NO you will not be required to complete the study) *

- Yes
- No

After section 2 Continue to next section

Section 3 of 4

SURVEY

This survey should take no longer than 15 minutes of your time. Please complete all answers as fully as possible for meaningful conclusions to be made from results. Thank You

Institutional Information

6 Questions

1.Which emergency centre are you currently working in?

Short answer text

2. Are you aware that the Western Cape recognizes English, Afrikaans and isiXhosa as official languages of communication for all government services including health services?

- ○ Yes
- ○ No

3. For the EC you are currently working in which of the three official languages are most commonly spoken? Please rate the frequency (1- most common to 3-least common)

	1	2	3
English	○	○	○
Afrikaans	○	○	○
IsiXhosa	○	○	○

In your experience: approximately what percentage of the patient population are English speaking (home language) in this EC? (Eg 50%)

Short answer text

In your experience: approximately what percentage of the patient population are Afrikaans speaking (home language) in this EC? (Eg 50%)

Short answer text

In your experience: approximately what percentage of the patient population are Isi-Xhosa speaking (home language) in this EC?

Short answer text

Are there any other languages you encounter in the patient population in this EC? (Please list all other languages you encounter in the order of frequency they occur)

Short answer text

For the "other language" you encounter most frequently (from the question above) please state how often you encounter this other language

- ○ more than once a shift
- ○ more than once a week
- ○ more than once a month
- ○ Other...

4. Does your EC have a trained and dedicated interpreter available to assist with communicating with patients in any of the three official languages?

- ○ Yes
- ○ No

If YES: For which languages?

Short answer text

Are they? (choose all applicable answers)

- ☐ Full time medical interpreters
- ☐ Community Trained Interpreters
- ☐ Telephonic Services
- ☐ Other...

If NO: Whom do you use to assist with communicating with patients? (choose all applicable answers)

- ☐ A colleague (i.e. another doctor)?
- ☐ Nursing staff?
- ☐ Admin staff?
- ☐ Family member?
- ☐ Another patient?
- ☐ Other...

5. Are you aware of the telephonic interpreter service "Folio InterTel Telephonic Interpreting" provided by the Western Cape Department of Health?

- ◯ Yes
- ◯ No

If YES:

- ○ I am aware of "Folio" but have not used it
- ○ I have used this service and found it to be very good at improving communication
- ○ I have used this service and found it to be okay at improving communication
- ○ I have used this service and found it not to be helpful in improving communication
- ○ Other...

If it was not helpful please explain what problems you faced using this system?

Long answer text

If NO: (choose all applicable answers)

- ☐ I would like to know more about this service
- ☐ I would be willing to use this service?
- ☐ Other...

To your knowledge is this service available at the current EC you are working in?

- ○ Yes
- ○ No

6. Are you aware of hospital based community trained interpreters provided by the Western Cape DOH?

- ○ Yes
- ○ No

If YES:

- ○ I am aware of this service but have not used it
- ○ I have used this service and found it to be very good at improving communication
- ○ I have used this service and found it to be okay at improving communication
- ○ I have used this service and found it not to be helpful in improving communication

If it was not helpful please explain what problems you faced using this system?

Long answer text

If NO: (choose all applicable answers)

- ☐ I would like to know more about this service
- ☐ I would be willing to use this service
- ☐ Other...

To your knowledge is this service available at the current EC you are working in?

- ○ Yes
- ○ No

Personal Information

9 Questions

1. What is your current qualification?

- ○ Medical Officer
- ○ Community Service
- ○ Emergency Medicine Registrar
- ○ Emergency Medicine Consultant
- ○ Other...

2. How long have you worked in this EC?

- ○ less than 3 months
- ○ 3-6 months
- ○ 6months-1year
- ○ Greater than a year

3. How long have you worked as an EC doctor? (in years)

Short answer text

4. What is your home/first language?

Short answer text

6.A For ENGLISH an official language of the Western Cape:

Indicate if you would be able to: (0 is not at all and 5 fully fluent and able to communicate with mutual understanding)

	0	1	2	3	4	5
a. Take a det...	○	○	○	○	○	○
b. Explain to ...	○	○	○	○	○	○
c. Explain to ...	○	○	○	○	○	○
d. Obtain inf...	○	○	○	○	○	○
e. Explain th...	○	○	○	○	○	○
f. Explain the...	○	○	○	○	○	○

6.B For AFRIKAANS an official language of the Western Cape:

Indicate if you would be able to: (0 is not at all and 5 is fully)

	0	1	2	3	4	5
a. Take a det...	○	○	○	○	○	○
b. Explain to ...	○	○	○	○	○	○
c. Explain to ...	○	○	○	○	○	○
d. Obtain inf...	○	○	○	○	○	○
e. Explain th...	○	○	○	○	○	○
f. Explain the...	○	○	○	○	○	○

6.C For isi XHOSA an official language of the Western Cape:

Indicate if you would be able to: (0 is not at all and 5 is fully)

	0	1	2	3	4	5
a. Take a det...	○	○	○	○	○	○
b. Explain to ...	○	○	○	○	○	○
c. Explain to ...	○	○	○	○	○	○
d. Obtain inf...	○	○	○	○	○	○
e. Explain th...	○	○	○	○	○	○
f. Explain the...	○	○	○	○	○	○

7. IF you were interviewed for your current position were you asked about your ability to communicate in the languages of patients attending this hospital prior to starting in this EC?

- ○ Yes
- ○ No
- ○ I was not interveiwed for this position
- ○ Other...

8. How often have you encountered a situation when you were unable to communicate independantly with a patient?

- ○ Rarely (Less than once a shift)
- ○ Sometimes (once or twice a shift)
- ○ Often (more than thrice a shift)
- ○ Other...

9. How have you overcome this language barrier (indicate all applicable)

- [ ] 1. Used an interpreter (medical personal-doctor, nurse)
- [ ] 2. Used an interpreter (family member, other patient)
- [ ] 3. Used an interpreter (support staff in hospital)
- [ ] 4. Used google translate or some other form of technology
- [ ] Other...

Please indicate which of the above you use most frequently

Short answer text

Effects of Language Barrier

5 Questions

1. Do you believe a language barrier results in any of the following? (choose all applicable options)

- [ ] 1. Inability or longer duration to get history
- [ ] 2. Longer duration to differential diagnosis
- [ ] 3. Increased special investigations (blood tests ordered/required to obtain info)
- [ ] 4. Increased time to definitive care
- [ ] 5. Longer stay in ED, Overnight Ward, Admission rate
- [ ] 6. Patients return because they did not fully understand treatment plan
- [ ] Other...

Please indicate which of the above occurs the most frequently

Long answer text

2. Which interventions would, in your view, improve the language barrier in regards to the three official languages recognized in the Western Cape? (indicate all applicable answers)

- [ ] 1. Full time interpreter on site for most notable languages of population from referral areas
- [ ] 2. Full time telephone interpreter
- [ ] 3. Training or hiring of doctors to speak more languages
- [ ] 4. Technology aided translation devices
- [ ] Other...

Please briefly explain your above choice/s (why do you use this method over another)

Long answer text

3. Which intervention, in your view, would improve the ability to communicate in languages other than the three official languages of the Western Cape? (indicate all applicable answers)

- [ ] 1. Full time interpreter on site for most notable languages of population from referral areas
- [ ] 2. Full time telephone interpreter
- [ ] 3. Training or hiring of doctors to speak more languages
- [ ] 4. Technology aided translation devices
- [ ] Other...

Please explain your above choice/s (Why you choose this over other options)

Long answer text

4. Would you be willing to learn the language or languages most often spoken in your environment if this was offered by the department of health?

- ○ Yes
- ○ No

If NO please explain why

Short answer text

5. How do you feel when you are unable to communicate effectively with a patient?

- ☐ 1. Frustrated with myself
- ☐ 2. Frustrated with patient
- ☐ 4. Angry over delay
- ☐ 3. Sad for patient
- ☐ Other...

Please provide any further comments related to languages and language issues in the EC that you may feel are relevant to this study?

Long answer text

Thank you very much for your time. We will be sharing the results of the survey with facility managers and hopefully publishing. If you would like to specifically learn the results of the study please email nasdocrat@gmail.com.

Description (optional)

After section 3 Submit form

Section 4 of 4

Consent not given

Description (optional)

You have not given consent to complete this survey. Please take a minute to explain why not. Thank you

Short answer text

Appendix 5: Proposal

FHS015 Section C: Research Proposal

"Language Barriers in the Emergency Centre (EC): A survey, of secondary public hospital EC doctors on the perceived presence and impact of language barriers"

Student:
Nasreen Docrat
Division of Emergency Medicine, Department of Surgery,
University of Cape Town
DCRNAS001

Supervisor:
A/Prof Peter Hodkinson
Division of Emergency Medicine, Department of Surgery,
University of Cape Town

Co-Supervisor:
Professor Ana Deumert
School of African and Gender Studies, Anthropology and Linguistics
University of Cape Town

This study is in partial fulfilment of the requirements for a Master's in Philosophy: Emergency Medicine - Clinical Emergency Care

Declaration

I, Nasreen Docrat, hereby declare that the work on which this thesis is based is my original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

I authorize the University to reproduce for the purpose of research either the whole or any portion of the contents in any manner whatsoever.

Plagiarism Declaration

1. I know that plagiarism is a serious form of academic dishonesty.

2. I have read the document about avoiding plagiarism, am familiar with its contents and have avoided all forms of plagiarism mentioned there.

3. Where I have used the words of others, I have indicated this by the use of quotation marks.

4. I have referenced all quotations and properly acknowledged other ideas borrowed from others.

5. I have not and shall not allow others to plagiarise my work.

6. I declare that this is my own work.

7. I am attaching the summary of the Turnitin match overview (if required to do so).

Signature: Signed by candidate

Date: 17 February 2019

Nasreen Docrat- DCRNAS001

What is the perceived presence and impact of language barriers in secondary government hospital ECs by Cape Town EC doctors?

Background

In busy emergency centres (EC) the world over, medical staff need to be able to ascertain the degree of severity of illness quickly and efficiently. The ability to communicate with your health provider gives context for a differential diagnosis but in many instances it can also act as an important therapeutic treatment. The existence of language barriers in multiple areas of medicine has been recognized and researched for decades in Europe and the United States.(2, 45, 46, 53)

Carrasquillo (29) et al (1999-USA) conducted a cross-sectional survey of English and non-English speaking patients 10 days after an emergency department visit. More than 50% of non-English speaking patients were not satisfied with their experience, and a significant amount said they experienced communication problems.

Hampers et al (1999)(2) attempted to identify if clinicians alter their approach when confronted with a language mismatch between themselves and their patients. In a prospective cohort study, they found the language barrier between physicians and families resulted in a higher rate of resources being used and longer duration of time in the ED.

Downing et all (2002)(45) suggested a system that incorporates language training for clinicians, dedicated interpreters and telephonic interpreters. Jacobs et al (2006)(53) conducted a systematic review and found that people with limited English proficiency (LEP) are less likely to receive the care they need and less likely to receive preventive care. LEP patients were more likely to be admitted, have longer hospital stays and were more at risk due to medical errors compared to English speakers. Three broad areas were identified as requiring more research, “the ways in which language barriers affect health and health care, the efficacy of linguistic access service interventions, and the costs of language barriers and efforts to overcome them.”(3)

It has been strongly noted that the language barrier in the emergency centre specifically can have significant adverse outcomes for patients, their families and can add additional strain to the health care system. Studies in the USA and Europe have shown that language barriers cause delays in definitive treatment, use extra time and resources, cause difficulty in explaining course of action and obtaining consent from patients, which ultimately, results in suboptimal clinical outcomes, increased use of already limited resources and poor patient satisfaction.(1, 2, 23, 28, 29, 42, 46, 53)

In South Africa all services are guided by the Batho Pele principles(54) which are aligned with the multiple constitutional ideals such as “providing service impartially, fairly, equitably and without bias” and “utilising resources efficiently and effectively”. These principles also acknowledges the patients’ rights charter which states “a patient has the right to be given full and accurate information in order to be able to make a decision on testing or treatment and all necessary health information must be given to a patient in a language understood by the patient and any proposed treatment must be explained to the patient”.(54)

South Africa has 11 official languages and in the Western Cape, the newly developed language policy initiated in 2017 equally recognizes English, Afrikaans, and isiXhosa in all aspects of government services.(2) The public health system is responsible for the majority of uninsured, poorer South Africans whose first language is not English. In our society where English is the predominant language of medical schools, language barriers will inevitably be an issue which requires urgent attention.

Research in South Africa, was initially very limited. Soon after the end of apartheid, during an 18 month period in 1993-94 Crawford (1999)(1) conducted interviews of doctors (who used nurses and lay interpreters) and patients. Even 25 years ago, Crawford, recognized that there was a discrepancy in doctors' ability to communicate with isiXhosa speaking patients in the Western Cape and that the problem would only get worse with the increased movement from the rural areas to the greater Cape Town metropole. It took a further 5 years before his article "We can't all understand the white's language: an analysis of monolingual health services in a multilingual society" was published in the International Journal of Sociology of Language.

Saohatse (1998)(18) conducted a survey of nurses and ad hoc interpreters at Chris Hani Baragwanath Hospital. Even two decades ago language barriers were noted as a problem and the solution of using nursing staff or lay interpreters, which is still implemented today in many hospitals across South Africa, was proved to result in poorer quality of care, inappropriate discharge, patient distress, medical consequences and non-compliance with medication.

It was only again in 2005 that significant research was done into the consequences of language incompatibility between clinicians and patients. Levin (2005)(24, 26) found, that both language and culture resulted in a misunderstanding of basic asthma care between doctors and isiXhosa speaking parents at Red Cross Children's Hospital (RCWMCH).

Levin's (2006)(25) follow up study aimed to identify barriers to optimal care for isiXhosa-speaking parents of patients at RCH. A questionnaire was administered to isiXhosa-speaking parents of children admitted to the short stay ward at RCH. Parents stated the following difficulties: understanding doctors (64%), making themselves understood (54%), asking questions (38%), dissatisfied with communication (69%) and concern about negative consequences (45%) for them or their children. Overall, communication problems were cited by more parents than structural and socioeconomic concerns. The study concluded that language issues are closely followed by socioeconomic issues as major barriers to good care for isiXhosa-speaking parents. Levin suggested, as did previous American studies, that more interpreters should be available and that medical staff should receive language training in order to holistically care for their patients.

Schlemmer et al (2006)(42) conducted interviews with members of staff and patients, at Hottentots Holland Hospital (HHH), a district hospital in the Cape Town metropole. Staff mainly spoke Afrikaans or English and large numbers of patients mainly isiXhosa. The aim of the study was to understand the effects of the language barrier on health workers and patients. Language barriers were found to result in poorer work efficiency, reduce certainty of diagnosis, cause ethical dilemmas in trying to take consent, negatively influence patients and staff attitudes towards each other, decrease satisfaction with care and cause cross-cultural misunderstandings. It was concluded that this problem was likely not limited to this hospital and other district hospitals may be experiencing similar problems. Staff recommended language and culture training, even with the extended work load this brings, to be the best solution as well as medically trained interpreters.

Deumert et al (2010)(28) in conjunction with the Western Cape Department of Health, conducted an empirical study in three public hospitals (1 metropolitan, 1 urban, and 1 rural) in the Western Cape. The study was focused on the increasing number isiXhosa-speaking patients who have entered the Western Cape medical system since the early 1990s. Expanding on previous studies this article took an in-depth look into 'unproductive patient–provider interactions' and argued that linguistic issues played a central role of such interactions. It is stated that communication requires, at a minimum, a common language. In a multilingual South Africa, this could, however, prove challenging. Questionnaires, staff and patient interviews as well as ethnographic observation were the source of data. Interviewees included nurses,

doctors, pharmacists, therapists as well as non-medical staff who had direct contact with patients, and/or were regularly pressed into service as interpreters. The results were in keeping with previous studies with patients expressing dissatisfaction about the doctors' inability to communicate and care. It was concluded that the situation at the hospitals leads to the systematic marginalization of patients who cannot express themselves in the main language(s) used by health providers. It was strongly suggested that what was needed was comprehensive, professional interpreting services at each health facility. Deumert states "language and communication are essential for equitable and effective health delivery in multilingual societies. 'Unproductive patient–provider interactions' due to language barriers directly impede medical diagnosis, treatment, health education, and trust".(28) This ultimately results in inequitable care for a large proportion of South Africans.

Hussey (2013)(29) echoed the sentiments of studies before when she stated "communication can become time consuming, which increases frustration levels and decreases empathy, approachability and confidentiality" and that untrained, ineffective interpreters and overworked nurses are not suitable to address the problem and multilingual education, as a part of professional training, and trained interpreters are required.

A systematic review by Tate (2015)(30) brought forward the need for more research on the effects of language barriers and ways to limit adverse outcomes due to language barriers in the pre-hospital setting. A follow up study by Tate et al (2016)(31) developed communication strategies for emergency medical personal for when they were challenged by language barriers as part of a multi-site, international study, in the Western Cape (South Africa) and New Mexico (USA). Tele-communicators across the study noted 3rd party telephonic interpreters as the most effective strategy, with limitations being time delays. Field providers across both sites also used similar techniques such as relying on bystanders, multilingual co-workers and nonverbal communication. Other limitations also noted were time delays, breaches of patient confidentiality, and inaccurate interpretation.

Two additional studies were conducted by Penn et al (2016) (2017)(33, 55), and focused on prehospital language barriers. Penn et al successfully decreased conversational mismatches and time to dispatch of medical personnel using conversational analysis at a call centre in the Western Cape. Training call takers to be more precise with their introductions and acknowledging the callers preferred language was the key.

Based on studies from Crawford, Levin, Hussey, Tate and many others, the Western Cape Department of Health initiated a pilot project in 2017 to train community interpreters to help address the language barrier experienced by isiXhosa-speaking patients. In the Western Cape during this time languages spoken were Afrikaans (41.4%); isiXhosa (28.7%) and English (27.9 %). English was used in more than 80% of medical interactions occurring across language and cultural barriers. Benjamin et al (2016)(36) recently highlighted some limitations of community trained translators in her study. The overriding themes suggested that the experience was a greater challenge on a practical and emotional level, and there was uncertainty about how community translators fit into the health system. It was concluded that these issues needed urgent attention because despite the legislative ideal (Batho Pele principles), progress was slow in addressing language access in health services in South Africa.

In 2019, how far have we progressed? Have we been able to solve the problem that Crawford concluded 25 years ago - "if health care is to become accessible and effective, the political will to address 'the language barrier' at all levels will need to be found"?(1)

This study aims to ascertain if doctors in emergency centres in secondary public hospitals in the Cape Metropole still perceive there to be language barriers between themselves and the patient population they serve. Are doctors aware of resources such as telephonic translation and community translators that have

been implemented by the Western Cape department of health to assist with translation in emergency centres? Are these resources being used and do they improve communication between doctors and patients?

A survey of emergency centre doctors could provide data on the continued perceived presence and extent of language barriers since the last major study almost a decade ago by Deumert et al. (2010)(28)

The findings could be used to reassess if progress has been made in improving communication. Also if initiatives implemented by the Western Cape department of health, such as training of community interpreters or telephonic interpreters have assisted doctors in communicating with their patients.

Research Question

What is the perceived presence and impact of language barriers in secondary government hospital ECs by Cape Town EC doctors?

Aims

The aim of this project is to determine to what extent language barriers are perceived to exist in emergency centres in secondary government hospitals in Cape Town.

Objectives

1. Conduct a survey of doctors in a representative sample of secondary hospital emergency centres
2. Determine the perceived occurrence of a language barrier in EC doctors' daily practice
3. Determine the perceived impact of these barriers from the EC doctors' perspectives
4. Ascertain how EC doctors currently overcome this barrier
5. Determine if EC doctors are aware of current resources provided by the Western Cape department of health to aid with communication

Study Methodology

Study Design and Setting

In secondary hospitals the majority of doctors may not speak the language of patients who come from a predetermined geographical catchment area, which may result in potential languages barriers. Potential adverse effects of language barriers exist across all levels of the public health care but could be more pronounced at a secondary level due to logistics of where the hospital is based, doctors who work in these hospitals and the variety of communities they serve.

This will be a quantitative survey of doctors in secondary government hospitals in the Cape Town metropole area. Medical officers (MO), registrars (REG), EM consultants (EMC) and community service

(COMM SER) doctors will be requested to participate. The following six secondary hospitals (which are all the urban district hospitals in the metropole) will be approached to participate, New Somerset Hospital (NSH), Victoria Hospital Wynberg (VHW), Karl Bremmer Hospital (KBH), Khayelitsha Hospital (KH), Eerste River Hospital (ERH) and Mitchells Plain Hospital (MP).

The survey (max 15 minutes) (See appendix 1) will be comprised of Likert-type questions. There will also be sections to expand on answers and a scenario to test actual practice rather than perceived fluency in different languages. These responses will be analysed and discussed in the findings of the study. Data to be collected will cover demographics, languages spoken, fluency of languages spoken, languages encountered, impact of language barriers and strategies currently implemented.

The survey (appendix 1) will be piloted with input from the Linguistics Section at UCT prior to dissemination.

Participants will complete the questionnaire online, using the Survey Monkey® software or a similar online survey tool, allowing participants to complete the questionnaire at a time and venue that is convenient for them. There are computers with internet access at all participating hospitals which can also be used.

Study Population

All South African MOs, REGs, EMC and COMM SER doctors working at the six hospital ECs will be eligible to participate. Surveys will coincide with the second month of registrar rotations to ensure doctors are familiar with the EC they currently work in. All eligible doctors in each facility will be approached (average staff compliment is 12-15), and a response rate of 60% would give approximately 7-10 doctors per facility. The survey link will remain open for 5 weeks with weekly reminders being sent via email for the duration of the time to increase the response rate.

Inclusion Criteria:

- South African MOs, REGs, EMC and COMM SER doctors working in participating ECs will be eligible to participate in the study.

Exclusion Criteria:

- Foreign doctors such as supernumerary registrars will not be eligible as there are too many confounders.
- Interns and locums will also not be eligible for the purpose of this study as their experience in the emergency centre may be limited, and they do not rotate for long.
- Any MOs, and COMM SER doctors with less than one month's experience working in the emergency centre will not be eligible to participate

Recruitment and Enrolment

Once institutional permission and department of health permission is obtained,(see appendix 4) the PI will meet with the head of each EC to explain the study and its importance, and to get an email list of staff. With permission a meeting will be held with eligible doctors to explain the importance and need for such a study. Emails will be sent via researcher or via the head of each participating EC if they prefer. Consenting doctors will complete the survey online using an online survey tool such as Survey Monkey ®.

Validity and Reliability

The survey will be developed in multiple stages. The key factors it addresses are based on prior research on language barriers in hospitals in Western Cape. A pilot survey will be conducted to check for bias and clarity. The survey will be developed in participation with the Linguistics Section at UCT. The survey consists of questions related to demographic data, institutional data, languages spoken, fluency in languages, languages encountered by doctors and current use of interpretation devices. Likert-type questions assess perceived frequency of language barriers, effects of barriers encountered, frequency of poor history/inaccurate history due to language barrier, frequency of increased resources use and delayed care due to poor communication. Participants will be asked to give strategies to overcome current language barriers from a list of possibilities as well as free text responses. The sample size is estimated to be approximately 12-15 eligible doctors per facility. For a total sample population of 72-90 possible participants. The generally acceptable online survey response rate of 60% will provide adequate numbers for the data to be meaningful in being able to gauge the perceptions of the participants.(56) Weekly reminders will be sent for a period of 5 weeks to increase the response rate.

Data Management

The online survey tool will collect and store the data set. Only the researcher will keep the responses on a password protected laptop. All data will be backed up on an online data base and password protected. Surveys will be conducted and all results will be reported without any identifying information about individuals, although hospitals will be identified for comparison. Total anonymity of both participants and facilities will be maintained.

Data analysis

Data will be captured from surveys into Microsoft Excel spreadsheets after which analysis will occur. Data will be reported using standard descriptive statistics and graphics such as tables, histograms and bar charts representing data analysed. Trends will be explored in the discussion.

Ethical Considerations

The researcher has no conflicts of interest to declare. Permission from Department of Health, Institution and Departmental heads will be obtained prior to surveys being sent to EC heads of departments.(see appendix 4) All eligible participants will do so voluntarily and will be required to consent prior to participating. All surveys will be anonymously completed and no identifying data will be used when reporting results.

Informed consent

The invitations to participate will be sent via email to the study population. A letter will accompany the invitation stating the purpose of the study and that all completed surveys will be anonymous and confidential. A consent tick box will need to be ticked “YES” prior to gaining access to the survey for the following statement: (See appendices 2, 3)

- I confirm I have read and understand the information sheet regarding the study “Language Barriers in Emergency Centres (EC): A survey, of secondary public hospital EC doctors in the Cape Town metropole, regarding the presence and effects of language barriers”

- I understand participation is voluntary and anonymous and that I am free to withdraw without consequences at any time
- I agree to take part in the above study

If participants tick “NO” they will be not be required to complete the survey.

Risks and benefits to participants:

There are no risks to participants of the survey as all surveys will be anonymous. There are no questions on the survey that could harm participants personally or professionally. The benefit of participating is the opportunity to share perceptions and experiences of a possible problem facing doctors in the EC in a safe and anonymous environment. This allows an awareness of the problem to be brought to the fore and allow for further research and solutions to be found to aid both doctors and patients.

Privacy and confidentiality

As stated previously all surveys will be completed anonymously. There is no way to identify participants from the data captured by the survey. All responses will be only available to the researcher on a password protect online cloud based system. All doctors will participate on a voluntary basis. All feedback of results will be done without the use of doctors’ personal information, and hospitals will not be identified by name.

Reimbursement

There will be no financial reimbursement for any participants.

Emergency care/ insurance for research-related injuries

No risk for any research related injuries arise

Dissemination of findings plan

The findings will be submitted in the form of an article to a peer-reviewed journal, as well as a report back to the Department of EMC, DOH for the Western Cape and to individual unit heads.

Strengths and limitations

The strength of this study are

1. It is based on previously conducted studies
2. The study covers hospitals in varying demographic regions across Cape Town and includes areas of all three prominent languages in the metropole as well as other languages doctors may encounter
3. The results generated from this study will help to identify if a problem exists
4. The study will likely lead to further research into possible solutions, as well as in-depth qualitative studies.

The Limitations of this study are

1. Small sample population
2. It only represents secondary hospitals in Cape Town

3. The survey will explore retrospective perceptions of doctors only and does not include other hospital staff or patients
4. Further study will need to be conducted at both a primary and tertiary level to fully understand the extent of the problem.
5. Cape Town metropole demographics vary greatly to other regions in Western Cape and South Africa and as such these results may not be generalizable.

Project timeline

2019	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN
Proposal Development	X												
EM-DRC	X	X	X										
Ethics					X								
Institutional permission					X	x							
Data Collection						X	X						
Data Analysis								X	X				
Compilation of Final Report										X	X	X	
Submission													X

Budget and Resources

ITEM	**DESCRIPTION**	**COST**
CONSUMABLES		
Office supplies, printing	Printing of documents	R500
LANGUAGE EDITING	Editor	R1000
TRANSPORT	To and From institutions	R500
	Total	R2000

Funding

This study will be self-funded by the student.

Appendix 1: Draft version of Survey

(This is a draft version of the survey with the central concepts, still to be refined and piloted)

SURVEY

This survey should take approximately 10-15mins of your time

Institutional Information

1. Which emergency centre are you currently working in?
2. In your experience with patients what language(s) do the majority of patients from referral areas to this EC speak?
3. To your knowledge does the hospital have a language policy?
   IF Yes how is it made available to staff?
4. Does the emergency centre have a trained and dedicated interpreter available to assist in communicating with patients?
   IF yes : for which languages?
   : are they trained community interpreters?
   : is it a telephonic service?
   : other?
   (Indicate all used)
   IF no: Whom do you use to assist with communicating with patients?
   : family members?
   : nurse/admin staff?
   : other?
   (Indicate all used)

5. Are you aware that the Western Cape recognizes English, Afrikaans and isiXhosa as its official languages of communication for all government services including health services?

6. Are you aware of the telephonic interpreter service "Folio InterTel Telephonic Interpreting" provided by the Western Cape Department of Health?
   If Yes-
   a. How often have you used it on average per week?
   b. Was it helpful?
   c. Did it provide you the ability to fully communicate with your patient?
   d. Would you recommend it to other doctors?
   e. What if any problems did you face using this system?
   If No-
   a. Would you like to know more about this service?
   b. Would you be willing to use this service?
   c. Do you think it will aid communication with your patient?

7. Are you aware of community trained interpreters provided by the Western Cape DOH?
   If YES
   a. Have you used their services?
   b. Did you find it helpful?
   c. Would you recommend this to other doctors?
   d. What if any problems did you face using this service?

If NO

a. Would you be willing to learn more about this service?
b. Would you be willing to use this service?
c. Do you think this would aid communication with your patients?

Personal Information

1. What is your current qualification?
2. How long have you worked in this EC?
3. How long have you worked as an EC doctor?
4. What is your home/first language?
5. How many languages do you speak? List these please
    a.
    b.
    c.
    d.
6. In which institution did you receive your medical training?
7. For the three most frequent languages you have encountered at this EC, please indicate using the scale, if you would be able to: (0 is not at all and 10 is fully)

Language 1: _____

a. Take a detailed history from the patient?
b. Explain to the patient your differential diagnosis?
c. Explain to the patient tests/images you require to confirm diagnosis?
d. Obtain informed consent for any procedures the patient may require?
e. Explain the next step (ie referral, discharge, await results) to the patient or family?

Language 2:_____

a. Take a detailed history from the patient?
b. Explain to the patient your differential diagnosis?
c. Explain to the patient tests/images you require to confirm diagnosis?
d. Obtain informed consent for any procedures the patient may require?
e. Explain the next step (ie referral, discharge, await results) to the patient or family?

Language 3:_____

f. Take a detailed history from the patient?
g. Explain to the patient your differential diagnosis?
h. Explain to the patient tests/images you require to confirm diagnosis?
i. Obtain informed consent for any procedures the patient may require?
j. Explain the next step (ie referral, discharge, await results) to the patient or family?

8. Were you asked about your ability to communicate in the languages of patients attending this hospital prior to starting in this EC?
9. Have you encountered a situation/s when you were unable to communicate with a patient?
   If YES, how often does this occur?
    a. Sometimes (less than twice a shift)
    b. Often (more than thrice a shift)
    c. Rarely
10. How have you overcome this language barrier (if more than one of the below please indicate which one you use the most)
    a. Used an interpreter (medical personal-doctor, nurse)
    b. Used an interpreter (family member, other patient)
    c. Used an interpreter (support staff in hospital)

d. Used google translate or some other form of technology

Effects of Language Barrier

1. Do you believe a language barrier affects your ability to care for your patient?
   If so which of the following are affects:
   a. Inability or longer duration to get history
   b. Longer duration to differential diagnosis
   c. Increased special investigations (blood tests ordered/required to obtain info)
   d. Increased time to definitive care
   e. All of the above (please indicate which one most occurs)_____
   f. None of the above
   g. Other-

2. Do you believe a language barrier results in increased use of resources?
   If so how?
   a. More tests required
   b. Longer stay in ED, Overnight Ward, Admission rate
   c. Patients return because they did not fully understand treatment plan
   d. All of the above (please indicate which one occurs the most)_____
   e. None of the above
   f. Other-

Which interventions would, in your view, improve current situation?

1. Full time interpreter on site for most notable languages of population from referral areas
2. Full time telephone interpreter
3. Training or hiring of doctors to speak more languages
4. Technology aided translation devices
5. Multiple above options_____
6. Other?

Which intervention would, in your view, improve the ability to communicate in languages other than the three official languages of the Western Cape?

a. Telephonic interpreter
b. Technology aided translation devices
c. Other?_____

Would you be willing to learn the language or languages most often spoken in your environment if this was offered by the department of health?

Please provide any further comments related to languages and languages issues in the EC that you may feel are relevant to this study?

Thank you very much for your time. If you would like to learn about the results of the survey, you can contact me at nasdocrat@gmail.com.

Appendix 2: LETTER OF EXPLANATION OF STUDY

Dear emergency centre physician (Com Serve/MO/REG/Consultant)

It would be much appreciated if you would complete the following survey titled "Language Barriers in Emergency Centres (EC): A survey, of secondary public hospital EC doctors in the Cape Town metropole, regarding the perceived presence and effects of language barriers". This study aims to help identify if doctors still experience language barriers which cause a disruption in patient care. In previous studies it has been shown that communication problems due to language barriers have caused difficulty for doctors in obtaining vital information from the patient and the patient feeling sometimes unhappy with the interaction.

The survey is administered as part of a research project conducted in partial fulfilment of the MPhil Emergency Medicine program of the University of Cape Town. It will take no longer than 15 minutes of your time but it will provide vital information regarding language related issues when communicating with patients in the emergency centre.

You will not be required to provide identifying information and the survey is entirely anonymous. No responses will be linked to any individual and no facility will be named in reporting of results. This study has been approved by the University of Cape Town, Faculty of Health Sciences Human Research Ethics Committee: HREC, Western Cape Department of Health and the facility you are currently working in.

Your responses could result in acknowledgement of a problem should one still exist and further research on how best to help doctors and patients to improve communication and guide government policy to improve resources available to both doctors and patients in emergency centres.

We do not anticipate any personal harm arising from study participation and you will not receive remuneration for participating in the survey.

Your participation in this study is voluntary, and there are no negative consequences for declining to participate. Please take time to read the consent prior to answering all of the questions. If you consent to participating please complete all questions as fully as possible to allow for meaningful conclusions to be drawn from results.

For any questions or concerns about the research please contact the principal investigator (see contact details below), or for any ethical concerns contact Prof Marc Blockman, the Chair of the University of Cape Town's Faculty of Health Sciences, Human Research Ethics Committee at Marc.Blockman@uct.ac.za or on 021 404 7682.

Thank You for your valuable time and participation in this study,

Dr Nasreen Docrat,

nasdocrat@gmail.com 0845813817 (Investigator and MPhil Student)

A/Prof Peter Hodkinson

peter.hodkinson@uct.ac.za 021 404 7601 (Supervisor)

Division of Emergency Medicine, University of Cape Town

Appendix 3: Consent (first page of online survey)

1. I confirm I have read and understand the information sheet regarding the study "Language Barriers in Emergency Centres (EC): A survey, of secondary public hospital EC doctors in the Cape Town metropole, regarding the perceived presence and effects of language barriers"

2. I understand participation is voluntary and anonymous and that I am free to withdraw without consequences at any time

3. I agree to take part in the above study (If NO you will not be required to complete the study)

YES NO

For any concerns prior to consent please contact

Researcher

Dr Nasreen Docrat

nasdocrat@gmail.com 0845813817

Principal Supervisor

A/Prof Peter Hodkinson

peter.hodkinson@uct.ac.za 021 404 7601

Division of Emergency Medicine, University of Cape Town

Human Research Ethics Committee

Prof Marc Blockman

Marc.Blockman@uct.ac.za

Chair of the University of Cape Town's Faculty of Health Sciences, Human Research Ethics Committee

Appendix 4: Letter of Authorization

Letters from:

1. Department of Health
2. Participating Hospitals
3. Emergency Centre HOD

Will be obtained once ethics approval has been obtained.

References

1. Crawford A. "We can't all understand the whites' language": an analysis of monolingual health Services in a multilingual society. International Journal of the Sociology of Language. 1999;136(1).
2. Hampers LC, Cha S, Gutglass DJ, Binns HJ, Krug SE. Language barriers and resource utilization in a pediatric emergency department. Pediatrics. 1999;103(6 Pt 1):1253-6.
3. . Oxford English Dictionary (https://www.oxfordlearnersdictionaries.com/definition/american_english/communication) accessed 26-01-2020.
4. Jacobs EA, Lauderdale DS, Meltzer D, Shorey JM, Levinson W, Thisted RA. Impact of interpreter services on delivery of health care to limited-English-proficient patients. Journal of general internal medicine. 2001;16(7):468-74.
5. Mangrio E, Sjögren Forss K. Refugees' experiences of healthcare in the host country: a scoping review. BMC Health Services Research. 2017;17(1):814.
6. Jaeger FN, Pellaud N, Laville B, Klauser P. The migration-related language barrier and professional interpreter use in primary health care in Switzerland. BMC Health Services Research. 2019;19(1):429.
7. Papic O, Malak Z, Rosenberg E. Survey of family physicians' perspectives on management of immigrant patients: attitudes, barriers, strategies, and training needs. Patient Education and Counselling. 2012;86(2):205-9.
8. Schyve PM. Language Differences as a Barrier to Quality and Safety in Health Care: The Joint Commission Perspective. Journal of general internal medicine. 2007;22(2):360-1.
9. Bagchi AD, Dale S, Verbitsky-Savitz N, Andrecheck S, Zavotsky K, Eisenstein R. Examining Effectiveness of Medical Interpreters in Emergency Departments for Spanish-Speaking Patients With Limited English Proficiency: Results of a Randomized Controlled Trial. Annals of Emergency Medicine. 2011;57(3):248-56.e4.
10. Flores G. The Impact of Medical Interpreter Services on the Quality of Health Care: A Systematic Review. Medical Care Research and Review. 2005;62(3):255-99.
11. Lee KC, Winickoff JP, Kim MK, Campbell EG, Betancourt JR, Park ER, et al. Resident Physicians' Use of Professional and Nonprofessional Interpreters: A National Survey. JAMA. 2006;296(9):1049-54.
12. Meeuwesen L. "Language Barriers in Migrant Health Care: A Blind Spot.". Patient Education and Counselling 862 (2012): 135–136.
13. Flores G. Language barriers to health care in the United States. N Engl J Med. 2006;355(3):229-31.
14. Jacobs EA, Vela M. Reducing Language Barriers in Health Care: Is Technology the Answer? JAMA Pediatrics. 2015;169(12):1092-3.
15. Osae-Larbi JA. Bridging the language barrier gap in the health of multicultural societies: report of a proposed mobile phone-based intervention using Ghana as an example. SpringerPlus Journals. 2016;5(1):900.
16. Saha S, Fernandez A. Language barriers in health care. Journal of general internal medicine. 2007;22 Suppl 2:281-2.
17. Swartz L, Kilian S, Twesigye J, Attah D, Chiliza B. Language, culture, and task shifting – an emerging challenge for global mental health. Global health action. 2014;7:23433.
18. Saohatse M. Communication problems in multilingual speech communities. South African Journal of African Languages 1998;18(4):111-7.
19. United Language Group- 5 Qualities Every Interpreter Should Have https://unitedlanguagegroupcom/blog/5-qualities-every-interpreter-should-have/ accessed 26-01-2020

[Internet].
20. Batho Pele Principles http://www.dpsa.gov.za/documents/Abridged%20BP%20programme%20July2014.pdf accessed 26-01-2020.
21. The Constitution of South Africa 1996 https://www.justice.gov.za/legislation/constitution/SAConstitution-web-eng.pdf Accessed 26-01-2020.
22. Patients' Rights Charter https://www.westerncape.gov.za/general-publication/heres-what-you-need-know-about-patients%E2%80%99-rights-charter accessed 26-01-2020.
23. Levin ME. Overcoming language barriers. South African Medical Journal. 2006;96(10):1058-60.
24. Levin ME. The importance of language and culture in paediatric asthma care. Current Allergy and Clinical Immunology. 2005;18.
25. Levin ME. Language as a barrier to care for Xhosa-speaking patients at a South African paediatric teaching hospital. South African Medical Journal. 2006;96(10):1076-9.

26. Levin ME. Different use of medical terminology and culture-specific models of disease affecting communication between Xhosaspeaking patients and English-speaking doctors at a South African paediatric teaching hospital. South African Medical Journal. 2006;96(10):1080-4.
27. Schlemmer A, Mash B. The effects of a language barrier in a South African district hospital. South African medical Journal. 2006;96(10):1084-7.
28. Deumert A. 'It would be nice if they could give us more language'--serving South Africa's multilingual patient base. Social science & medicine (1982). 2010;71(1):53-61.
29. Hussey N. The language barrier: the overlooked challenge to equitable health care: Emerging Public Health Practitioner Awards. South African Health Review . 2012; 189–195.
30. Tate RC. The Need for More Prehospital Research on Language Barriers: A Narrative Review. The western journal of emergency medicine. 2015;16(7):1094-105.
31. Tate RC, Hodkinson PW, Meehan-Coussee K, Cooperstein N. Strategies Used by Prehospital Providers to Overcome Language Barriers. Prehospital Emergency Care :. 2016;20(3):404-14.
32. Penn C. Factors affecting the success of mediated medical interviews in South Africa : review article. 2007;20(2):66-72.
33. Penn C, Koole T, Nattrass R. When seconds count: A study of communication variables in the opening segment of emergency calls. J Health Psychol. 2017;22(10):1256-64.
34. Western Cape Language Policy https://www.westerncape.gov.za/general-publication/western-cape-language-policy Accessed 19-01-2019 [
35. Van den Berg VL. Still lost in translation: language barriers in South African health care remain. South African Family Practice. 2016;58(6):229-31.
36. Benjamin E, Swartz L, Chiliza B, Hering L. Language barriers in health : lessons from the experiences of trained interpreters working in public sector hospitals in the Western Cape. South African Health Review 2016;2016(1):73-81.
37. Burch V. Cultural competence or speaking the patient's language? African Journal of Health Professions Education. 2016;8:3.
38. Docrat Z RK, Kaschula HR. How South Africa's universities are making more students multilingual https://theconversation.com/how-south-africas-universities-are-making-more-students-multilingual-116638 Accessed 26-01-2020 The Conversation Africa Inc2019 [
39. Matthews M, Van Wyk J. Speaking the language of the patient: indigenous language policy and practice. South African Family Practice. 2016;58(1):30-1.
40. P Diab MC, MFamMed; M Matthews, MB ChB, DOH, MPH; R Gokool, BA, BA Hons, MA. Medical students' views on the use of video technology in the teaching of isiZulu communication, language skills and cultural competence

African Journal of Health Professions Education. 2016;8(1.402):11-4.
41. Khoury LR. An evaluation of the use of an e-learning platform in complementing Xhosa language teaching and learning as an additional language: Univeristy of South Africa; 2015.
42. Schlemmer A, Mash B. The effects of a language barrier in a South African district hospital. S Afr Med J. 2006;96(10):1084-7.
43. Flores G, Abreu M, Schwartz I, Hill M. The importance of language and culture in pediatric care: Case studies from the Latino community. The Journal of pediatrics. 2001;137:842-8.
44. Folio InterTel Telephoinc Interpreting https://www.folio-online.co.za/#intertel accessed June 2019.
45. Shelmerdine S. Pathways to Inhumane Care: Medical Culture in a South African Emergency Unit. Masters Thesis: University of Cape Town; 2011.
46. Carrasquillo O, Orav EJ, Brennan TA, Burstin HR. Impact of language barriers on patient satisfaction in an emergency department. Journal of Gen Internal Medicine. 1999;14(2):82-7.
47. Rossouw L, Seedat S, Emsley R, Suliman S, Hagemeister D. The prevalence of burnout and depression in medical doctors working in the Cape Town Metropolitan Municipality community healthcare clinics and district hospitals of the Provincial Government of the Western Cape: A cross-sectional study. South African Family Practice. 2014;55:567-73.
48. Saha S, Fernandez A. Language Barriers in Health Care. Journal of general internal medicine. 2007;22(2):281-2.

49. Tumbo JM, Couper ID, Hugo JFM. Rural-origin health science students at South African universities South African Medical Journal. 2009;99:54-6.
50. van der Merwe LJ, van Zyl GJ, St Clair Gibson A, Viljoen M, Iputo JE, Mammen M, et al. South African medical schools: Current state of selection criteria and medical students' demographic profile. South African Medical Journal. 2016;106:76-81.
51. George A, Blaauw D, Thompson J, Green-Thompson L. Doctor retention and distribution in post-apartheid South Africa: tracking medical graduates (2007–2011) from one university. Human Resources for Health. 2019;17(1):100.
52. Tankwanchi AS, Hagopian A, Vermund SH. International migration of health labour: monitoring the two-way flow of physicians in South Africa. BMJ Global Health. 2019;4(5):e001566.
53. Jacobs E, Chen AH, Karliner LS, Agger-Gupta N, Mutha S. The need for more research on language barriers in health care: a proposed research agenda. Milbank Q. 2006;84(1):111-33.
54. In: Health Do, editor. 2013/2014.
55. Penn C. Factors affecting the success of mediated medical interviews in South Africa: review article. 2007. Current Allergy and Clinical Immunology. 2007;20(2):66-72.
56. Berman DM, Tan LL, Cheng TL. Surveys and Response Rates. Pediatr Rev. 2015;36(8):364-6.