

# Knowledge, attitudes, perceptions and readiness of community pharmacists practising in the province of KwaZulu-Natal, to the proposed National Health Insurance in South Africa

*Govender Y<sup>1</sup> and Naidoo P<sup>2</sup>*

## **Abstract**

*Changes in the South African healthcare environment are well under way in preparation for the proposed National Health Insurance (NHI) scheme. The successful implementation of the NHI will result in universal health coverage for the population and requires collaboration of all healthcare providers. Hence, this study was conducted to determine the knowledge, attitudes, perceptions and readiness of community pharmacists practising in the province of KwaZulu-Natal towards the proposed NHI programme in South Africa. A descriptive cross sectional study was conducted by the administration of closed-ended anonymous questionnaires to 310 community pharmacists practising in the province of KwaZulu-Natal. Data were analysed using Stata version 13.1. The results showed that awareness of the NHI was high at 94,1% and more than 41% of respondents indicated poor or no knowledge of the NHI. The general attitude of respondents towards the NHI was positive and they perceived its expected transitions as favourable but cited the shortage of drugs, overcrowding and improving the quality of healthcare as major challenges that could be encountered. Over 76% of the respondents indicated that they possessed the required skills to engage in the NHI programme and almost 70% indicated that they were ready for the NHI with regards to IT support but limited human resources, inadequate infrastructure and the lack of waiting room space may pose barriers to their readiness. The study also concluded that educational efforts need to be exerted to increase the knowledge and understanding of the proposed NHI programme in order to ensure successful implementation in the pharmacy sector.*

**Keywords:** Awareness, knowledge, attitudes, perceptions, community pharmacists, National Health Insurance, South Africa.

---

<sup>1</sup> Discipline of Pharmaceutical Sciences, College of Health Science, University of KwaZulu-Natal, South Africa: Email: [yanasg@telkomsa.net](mailto:yanasg@telkomsa.net)

<sup>2</sup> Discipline of Pharmaceutical Sciences, College of Health Science, University of KwaZulu-Natal, South Africa.

## Introduction

Changes in the South African healthcare environment are well under way in preparation for the proposed National Health Insurance (NHI) scheme. The successful implementation of the NHI will result in universal health coverage for the population and requires collaboration of all healthcare providers.

The South African health system is often described as two-tiered as it consists of a public sector and a private sector that co-exists. A greater percentage of the population (84%) rely on the public sector for its health requirements whilst the private sector services 16% of South Africa's population of 48.9 million (Department of Health: Green Paper, 2011; Ramjee and Macleod, 2013). Although health expenditure takes 8.3% of the South African gross domestic product; a figure which is higher than the 5% recommended by the World Health Organisation (WHO), health outcomes remain poor (Marjorie, 2015; DOH Green paper, 2011).

The public sector is strained as it lacks financial and human resources to address the health needs of the majority of the South African population which buckles under the 'quadruple burden of disease' which has been identified as HIV/AIDS and TB, maternal and child mortality, non-communicable diseases and violence/injuries (DOH Green paper, 2011; Marjorie, 2015; Mailacheruvu and McDuff, 2014). The quality of healthcare in many of the public hospitals is less than satisfactory due to deteriorating infrastructure, underfunding, mismanagement and neglect (Benatar, 2013).

The private sector of healthcare is provided by medical aid schemes that service people who are employed and are able to contribute towards a medical aid and /or can afford to make out-of-pocket payments (DOH Green Paper, 2011). Health costs in the private sector have spiralled out of control and the private sector is regarded as being unsustainable in the future (Maillacheruvu and McDuff, 2014). This dual healthcare system that services people based on their ability to pay is in direct contrast with the universally acceptable principle of social solidarity and equity as promoted by the World Health Organisation (DOH Green Paper, 2011).

On 12 August 2011 the National Department of Health launched the Green Paper on the National Health Insurance that will be rolled out in South Africa over a period of 14 years. The White paper followed 4 years later, being released in December 2015. The successful implementation of the NHI will ensure universal health coverage for all South Africans, minimizing out-of-pocket payments. It is envisaged that the NHI will eliminate the gradient of inequalities that currently exists between the public and private healthcare sectors. The Green Paper sets out a 10-point plan that requires a total overhaul of the existing healthcare system, to strengthen management systems and completely transform healthcare delivery and revitalize infrastructure (DOH Green Paper, 2011). It also stresses the dire need for increased human resources and will focus on preventative health at the primary health care level.

With regard to the private sector, it is accepted that community pharmacists possess the skills necessary to contribute extensively to the objectives of the NHI (Ward et al, 2014; Gilbert, 1998). Engaging with pharmacies in the private sector would increase points of access of primary health care for the population, particularly when it comes to the collection of chronic medications and health promotion. Consequently, contracting with private facilities would result in greater equity in facility distribution between rural and urban provinces (Ward et al, 2014). A greater involvement of community pharmacies in the caring of public sector patients will assist in relieving pressure on the overloaded public sector facilities (Gilbert, 1998).

The proposed NHI system will involve the integration and collaboration among various stakeholders to ensure its survival and pathway to success. Therefore, the views, perceptions and expectations of the different stakeholders, which include the general public and the private healthcare industry, need to be understood and taken into consideration.

It is a general contention that community pharmacists would be expected to play their role in the transition of South Africa's health environment into a high quality, affordable and accessible health system with the aim of achieving equity. Hence, the knowledge and attitude community pharmacists about the NHI may their involvement in the implementation of the NHI. This is why the present study was conducted with the aim to determine the knowledge, attitudes, perceptions and readiness of community pharmacists practising in the province of KwaZulu-Natal, towards the proposed NHI programme in South Africa.

## **Methodology**

### ***Study design and setting***

This was a cross-sectional descriptive study conducted amongst selected community pharmacists practising in the province of KwaZulu-Natal, South Africa.

### ***Sample selection and sampling method***

A list of all 497 community pharmacies situated in the province of KwaZulu-Natal was obtained from the SA Pharmacy Council and utilised for the sample selection. An acceptable sample size was determined to be 217 using an applicable grid provided by the statistician. The desired confidence level was set at 95%. To accommodate a non-response rate of 30% the number of questionnaires distributed was 310, all pharmacies were randomly selected. Pharmacists practising in public and private sector institutional pharmacies, wholesale, manufacturing and academic institutions were excluded from the study.

### ***Instrument***

The survey instrument was a closed-ended anonymous coded questionnaire. The instrument had two sections; the first section focused on establishing the demographic profile of the pharmacists. The second section contained questions that assessed the knowledge and awareness, attitudes and perceptions and readiness of the pharmacists towards the NHI.

### ***Administration of questionnaire and data collection process:***

The questionnaire was either emailed, faxed or hand delivered depending on the method preferred by the pharmacist after obtaining their consent. The pharmacists were given 2 weeks to complete the questionnaire after which, the pharmacists were contacted to check if the questionnaires were completed for collection. A further week was allowed if questionnaires were not completed.

### ***Data capture and analysis***

The returned questionnaires were numbered, coded and their data were captured. The accuracy of data capturing was checked by means of a printout. After capturing all data onto the database, data were cleaned and edited. Data were analysed using Stata version 13.1. Frequency tables were generated for each variable and inappropriate responses were identified. The Fisher Exact Test was used to compute p-values. A p-value < 0,05 was considered to be statistically significant. Descriptive statistics included proportions and percentages calculated on the basis of frequencies of variables. Inferential statistics were used to compare groups and to make inferences from the sample to the population.

### ***Ethical Considerations***

Ethical approval was obtained from the UKZN Biomedical Research Ethics Committee with approval number BE 318/15. Confidentiality of data was maintained at all times and only the researcher had access to the information. Respondents remained anonymous at all times.

## Results

Data collection was conducted over a period of three months and a deadline had to be introduced to ensure that questionnaires were completed and returned by willing respondents. A response rate of 49% was achieved as only 152 respondents returned completed questionnaires.

### *Demographics of respondents*

Almost 60% of respondents were male. More than 50% of respondents were between the ages of 30 and 50 years old. More than half the respondents had more than 16 years of experience in pharmacy. There were more independently owned pharmacies than corporate owned pharmacies.

### *Views of pharmacists on their knowledge, attitude, perceptions and readiness*

**Table 1: Knowledge of the Community Pharmacists to the NHI.**

CATEGORY		N (%)
KNOWLEDGE OF GOVERNMENT'S 10 POINT PLAN	Yes	54(35.5)
	No	98(64.5)
RESPONDENT'S SELF-RATING OF NHI KNOWLEDGE	Excellent	4(2.6)
	Very Good	8(5.3)
	Good	28(18.4)
	Satisfactory	49(32.2)
	Poor	58(38.2)
	No Knowledge	5 (3.3)

The awareness of the NHI programme was found to be very high as 98,1% of pharmacists interviewed were aware of the programme. However, although a slight majority of respondents (58,5%) rated their knowledge on the NHI between satisfactory and excellent; just over a third of them were aware of government's 10-point plan of action to implement the NHI in South Africa.

The overall attitude of the community pharmacists towards the NHI was positive. More than half of the respondents felt that the quality of healthcare will improve under the NHI and that it would achieve equity in healthcare, eliminating barriers and inequalities. Close to 70% of respondents felt that successful implementation of the NHI will increase life expectancy in South Africa and will ensure a healthier workforce and consequently result in improved employment and economic growth.

**Table 2: Attitudes of the Community Pharmacists towards the NHI.**

CATEGORY		N (%)
<b>SUPPORT UNIVERSAL HEALTH COVERAGE</b>	Yes	120 (79.0)
	No	21 (13.8)
	Undecided	11(7.2)
<b>WOULD SUPPORT INFORMATION CAMPAIGNS</b>	Yes	138 (90.8)
	No	14 (9.2)
<b>SUPPORT OF HEALTH CARE TRANSFORMATION VIA NHI</b>	Yes	96 (63.2)
	No	18 (11.8)
	Undecided	38 (25)
<b>BELIEVE THAT COMMUNITY PHARMACY PARTICIPATION IS CRUCIAL FOR NHI SUCCESS</b>	Yes	146 (96)
	No	6 (4)

Consequently, an overwhelming majority of pharmacists stated that they would support information campaigns about the NHI and believed that the participation of community pharmacies was crucial to the success of the initiative.

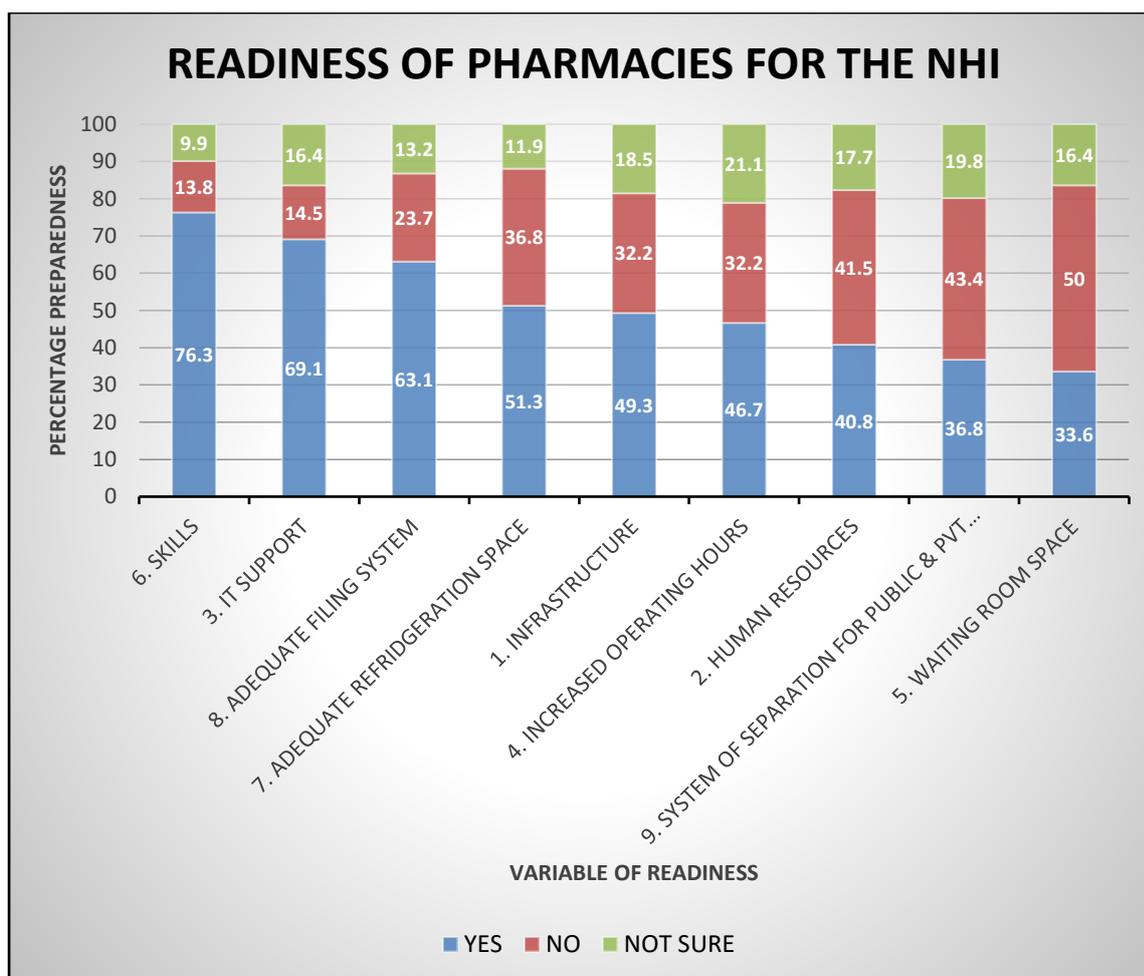
Similarly, the majority of respondents (76,3%) believed that a partnership between government and private community pharmacies will be mutually beneficial, with 77% of them stating that the NHI will improve the population’s access to healthcare.

**Table 3: Perceptions of the Community Pharmacists towards the NHI**

Perceptual aspects assessed	Agree N(%)	Neutral N(%)	Disagree N(%)
<b>1. Government-Private community pharmacy partnership would be mutually beneficial</b>	116(76.3)	24(15.8)	12(7.9)
<b>2. There are adequate private pharmacies to handle the patient load of the NHI</b>	77(50.6)	34(22.4)	41(27.0)
<b>3. Private community pharmacies are ready for the NHI</b>	58(38.1)	39(25.7)	55(36.2)
<b>4. The NHI will increase the population’s access to healthcare</b>	117(77.0)	24(15.8)	11(7.2)

Respondents cautioned that the shortage of skilled healthcare workers posed the greatest challenge to the implementation of the NHI (82,9%). Shortage of drugs and overcrowding at health facilities remained the major challenges that could be encountered.

With regard, to the readiness of community pharmacies’ readiness to implement NHI, over 51% of respondents stated that there were adequate skills, information technology systems, and storage facilities including cold storage spaces to accommodate the increased influx of patients due to NHI to community pharmacies.



**Figure 1: Readiness of the Community Pharmacies for the NHI.**

However, less than 50% of respondents were wary about the physical infrastructure at community pharmacies, namely waiting space and furniture, opening hours, number of pharmacy personnel and whether there would a need to separate public and private patients. As shown, below, the above views varied with regard to the number of experience of respondents and the characteristics of categories of pharmacies.

**Table 5: IT support and years of experience of pharmacist: n=152**

	0-5years	6-10years	11-15years	16-20years	>20years
<b>IT Support Readiness</b>					
Yes (n = 105)	(10) 43%	(13) 65%	(23) 82%	(13) 57%	(46) 79%
No/Not sure (n = 47)	(13) 57%	(7) 35%	(5) 18%	(10) 43%	(12) 21%

Pharmacists with less than 6 years of experience, seemed more pessimistic about the readiness of IT support than those with more experience.

**Table 5: Readiness with regards to IT support and category of pharmacy: n=151**

	<b>Independent</b>	<b>Chain</b>	<b>Corporate</b>	<b>Independent-chain</b>
<b>IT Support Readiness</b>				
Yes (n= 105)	(67) 81%	(11) 61%	(18) 56%	(9) 50%
No/Not sure (n= 46)	(16) 19%	(7) 39%	(14) 44%	(9) 50%

In contrast, independent pharmacists reported the highest degree of readiness with respect to IT support. The same group also held similar views with regard to readiness of physical infrastructure as shown below.

**Table 6: Infrastructure readiness and category of pharmacy: n=151**

	<b>Independent</b>	<b>Chain</b>	<b>Corporate</b>	<b>Independent-Chain</b>
<b>Infrastructure Readiness</b>				
Yes (n= 75)	(48) 58%	(4) 22%	(14) 44%	(9) 50%
No/Not sure (n = 76)	(35) 42%	(14) 78%	(18) 56%	(9) 50%

With regard to cold chain management, the above trend was noted as independent pharmacists were more confident that they have the cold chain facilities to handle an increased volume if required.

**Table 7: Readiness with regards to refrigeration and category of pharmacy: n= 151**

	<b>Independent</b>	<b>Chain</b>	<b>Corporate</b>	<b>Independent-Chain</b>
<b>Refrigeration</b>				
Yes ( n=78)	(53) 64%	(6) 33%	(10) 31%	(9) 50%
No/Not sure( n= 73)	(30) 36%	(12) 67%	(22) 69%	(9) 50%

## Discussion

Over 60% of the respondents rated their knowledge as satisfactory to excellent on the proposed NHI. Although, the majority of respondents rated as knowledgeable about the NHI, it is disconcerting that about two-thirds of the respondents were ignorant about the Minister of Health's 10-point plan of action which includes the NHI. This is of concern as this group of respondents are expected to play a critical role in the implementation of NHI; what is undeniable is that awareness about the NHI is really among the respondents. The findings about the self-rated knowledge about the NHI is similar to what had been reported by a study done in Nigeria where it was found that one third of the community pharmacists had satisfactory knowledge on public health programmes (Offu et al, 2015). These findings suggest that there is a need for educational interventions aimed at community pharmacists with the intention of increasing their level of knowledge on public health issues and policies.

With regard to the attitude of pharmacists interviewed, it seems that community pharmacists in KwaZulu-Natal have a positive attitude towards the proposed NHI programme. An overwhelming majority of them believe that the NHI will improve the population's access to healthcare. Consequently, it can be deduced that community pharmacists do possess the desire to improve equity in healthcare delivery to the population and this mirrors the key findings of an investigation conducted by the Pharmacy School at the University of Nottingham that explored pharmacists' perceptions about their contribution to improving public health (Anderson et al, 2003).

In this study it was reported that pharmacists perceived the activities that improve the population's health to be of a high level of importance. It was concluded that the pharmacists' perceptions and attitudes influence their behaviour in conducting these activities. Their positive attitude is supplemented by positive perceptions that a partnership between government and private community pharmacies will be mutually beneficial and that the participation of community pharmacies was crucial to the success of the initiative. Hence, it not surprising that the majority of them stated that they would support information campaigns about the NHI. The above findings bode well with the envisaged role of the community pharmacists in the NHI programme which is aptly outlined in a paper presented to the DOH by the Independent Community Pharmacist's Association (ICPA) (ICPA presentation to DOH, 2016). Community pharmacists in South Africa and elsewhere have committed to play a role in public health education, primary health care and health promotion and prevention in addition to their traditional role as custodians of medicines (Eades et al, 2011).

It is interesting to note that pharmacists noted inadequate infrastructure, limited human resources and lack of waiting room spaces as potentially significant barriers to community pharmacists' participation in the NHI programme. This finding is important as it highlights the fact that pharmacists have a realistic view on their limitations. The barriers mentioned are not unique to South Africa; other countries have also reported similar findings (Offu, 2015; La libertè, 2012).

With regard to skills required for the implementation of the NHI, over 75% of community pharmacists indicated that they were ready for the NHI with regards to skills that they possess. This is similar to a study conducted in Jos, Nigeria where it was found that participants indicated that they possessed adequate knowledge, skills and training to participate in the provision of public health promotion services (Adebayo et al, 2015). Community pharmacists that participated in a Canadian study also believed that they possess adequate training and skills to engage in public primary health care programmes (Dobson et al, 2006).

Taken together, valuable lessons can be learned from other countries that have successfully achieved universal health coverage. One such country is Turkey where a Health Transformation Programme was introduced in 2003 and universal health coverage was achieved in 10 years (Atun, 2015). Numerous favourable factors were reported to have contributed to the creation of a healthcare environment that facilitated the accelerated pace at which health reform was achieved. One of the major factors acknowledged was that Turkey's population showed positive acceptance of the health reform policies and the health professionals' foreseen resistance was thus appropriately managed. Therefore policymakers need to involve the pharmacy sector (together with other stakeholders) in the implementation process of the NHI with the intention of creating an environment that makes the health sector receptive to the forthcoming transitions that is anticipated of the NHI. Meaningful collaboration

with healthcare professionals including community pharmacists will achieve commitment and support from this sector.

Moreover, considering the diminishing remuneration to community pharmacists from dispensing medicines, pharmacists must adopt a model that embraces a combination of dispensing and the provision of patient orientated pharmaceutical services that would increase remuneration. Pharmacists have voiced their opinion that they consider current remuneration as inadequate, when time spent on the provided services are considered (Sherilyn et al, 2014). Therefore, as the role of community pharmacists around the world is expanding and revenue from dispensing is rapidly diminishing, it is anticipated that patient-orientated services will play a significant role in community pharmacy models in the future. Pharmacists must consequently be adequately reimbursed for their time and expertise.

### **Conclusion and Recommendations**

Although awareness of the NHI among community pharmacists is high, educational efforts need to be exerted to increase the knowledge and understanding of the proposed NHI programme and related health policies. Pharmacists displayed a positive attitude towards the NHI programme and believe that they are ready for the implementation of the NHI despite infrastructural constraints. It is our recommendation that similar surveys be conducted in other provinces and be extended to other healthcare providers to enable a better understanding of the expected response of healthcare professionals to the NHI programme in order to facilitate its successful implementation.

### **Limitations**

The results of this study may not be applicable to all community pharmacists practicing in South Africa, since the sampling was relatively small and confined to the province of KwaZulu-Natal. In addition, this was a self-reported study, so the responses of participants may have been affected by the social desirability bias.

### **References**

Adebayo AM, Naima N, Kenneth Y, Shalkur D & Comfort S. Assessment of community pharmacists' perceived barriers and disadvantages in providing health promotion services in Jos, Nigeria. *World Journal of Pharmaceutical Sciences*, 2015.

Anderson Claire, Blenkinsopp Alison & Armstrong Miriam. Pharmacists' perceptions regarding their contribution to improving the public's health: A systematic review of the United Kingdom and international literature: 1990-2001. *International Journal of Pharmacy Practice*. April 2003.

Atun Rifat. International Health Care Systems: Transforming Turkey's Health System-Lessons for Universal Coverage. *New England Journal of Medicine*. 2015; 373: 1285-1289, October 1, 2015. DOI: 10.1056/NEJMp 1410433.

Benatar S. The Challenges of Health Disparities in South Africa. *South African Medical Journal*, March 2013 (103/3), P154-155.

Dobson RT, Henry CJ, Taylor JG, Zello GA et al. Interprofessional Healthcare Teams: Attitudes and environmental factors associated with participation by community pharmacists. *Journal of Interprofessional Care*. Vol. 2, 2006, Issue 2. p119-132.

Eades CE, Ferguson JS & O'Carroll RE. Public Health and Community Pharmacy: A systematic review of pharmacist and consumer views. *BMC Public Health*, 2011, 11:582. DOI: 10.1186/1471-2458-11-582.

Gilbert L. Community Pharmacy in South Africa; A changing profession in a society in transition. *Health and Place*, Volume 4, Issue no. 3, 1998, p273.

How can independent community pharmacies contribute to the NHI. Presentation to the DOH by the ICPA- 21 June 2016

Jobson Marjorie. Khulumani Support Group. Structure of the Health System in South Africa. Johannesburg, October 2015. <http://www.khulumani.net/>. Last accessed 21/10/16.

Lalibertè M, Perreault S, Damestoy N & Lalonde L. Ideal and actual involvement of community pharmacists in health promotion and prevention: A cross sectional study in Quebec, Canada. *BMC Public Health* 2012 12:192.

Maillacheruvu Priya, McDuff Elaine. South Africa's return to Primary Care: The Struggles and Strides of the Primary Health Care System. *The Journal of Global Health*, August 10, 2014.

Matsoso MP, Fryall R. National Health Insurance: The first 18 months. *South African Health Review*, 2012/13 p28.

Offu O, Anetoh M, Okonta M, Ekwunife O. Engaging Nigerian Community pharmacists in Public Health Programmes: Assessment of their knowledge, attitude and practice in Enugu Metropolis. *Journal of Pharmaceutical Policy and Practice*. V8, 2015. PMC4638028. Doi:10.1186/540545-015-0048-0.

PSSA Perspectives. *South African Pharmaceutical Journal*. 2012, Vol. 79, No. 1.

Ramjee S, Macleod H. Private Sector perspectives of the NHI. *South African Health Review*. 2013/2014. P94.

Sherilyn K.D, Houle K, Grinrod A, Chatterly T, Tsuyuki RT. Paying pharmacists for patient care; A systematic review of remunerated clinical care services. *Canadian Pharmacists' Journal*, July 2014. 147(4): 209-232.

South Africa. Department of Health Green Paper: National Health Insurance in South Africa. 2011. Accessed 21 October 2016.

Ward K, Sanders D, Leng H, Pollock AM. Assessing equity in the geographical of community pharmacies in South Africa in preparation for a National Health Insurance scheme. *Bulletin of the WHO*, 2014; 92 482-489).