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NHI: The cost of emigration

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The concept of universal access to quality healthcare is not an outlandish one. It is a constitutional right, guaranteed to South Africans under Section 27 of the Constitution, and underpinned by the need to exact an equal standard of healthcare, regardless of socio-economic status. Equal being the operative word.

But, there are unintended consequences of a universal coverage model. The most pertinent in the current macroeconomic environment is the absorption of private healthcare workers onto the government's payroll, which will restrict National Treasury's (NT) ability to trim the wage bill (its largest expenditure component) in the short term. At a time of limited revenue growth and rising debt obligations, NT will be forced to prioritise its policy objectives.

The broader implication relates to the progressive increase in emigration by medical professionals. The economic impact, particularly if we consider that many medical professionals, principally specialists, that emigrate are in a higher earnings demographic, is a significant outflow of wealth, decline in the tax base and, critically, further erosion of South Africa's skills base, diminishing the already poor doctor-patient ratio. Vacancies are unlikely to be filled expediently by immigrants due to the dwindling critical skills list commissioned by the Department of Home Affairs and lengthy delays in registering foreign doctors.

Based on anecdotal evidence and emigration patterns, we consider the impact of migration on the tax base and the consequent loss of revenue that will exacerbate the funding shortfall proposed in the Green Paper[1] of 2011.

Cash versus concept

The National Health Insurance (NHI) Bill, which provides a framework for healthcare funding, is the proposed conduit through which the universal access to quality healthcare will be achieved, provided the necessary structural challenges that exist in both the public and private sector are resolved. What is often misconstrued is the intention of the Bill: it is a framework to promote cross-subsidisation of the healthcare system through a central pool of funds rather than a structure for operational implementation.

Yet, the minsters of health and finance appear to be at odds over NHI funding needs (which is over and above government spending on health) with current market estimates of the shortfall expressed in the Green Paper ranging from R166bn to R450bn depending on the method of taxation and GDP deflator applied. NT is compiling a report to quantify the cost of implementation and funding thereof but in doing so requires a thorough understating of the proposed overhaul of South Africa's 'fragmented' healthcare system. A memorandum attached

[1] Department of Health (2011), *National Health Act, 2003: Policy on National Health Insurance* (Available: http://pmg-assets.s3-website-eu-west-1.amazonaws.com/docs/110812nhi_0.pdf. Accessed 10 September 2019.
Please refer to Appendix for NHI timeline

to the Bill suggests that an additional R30bn would be required by 2025 on top of the current R220bn health budget to implement "the full set" of NHI interventions in six years from now. This implies that the department adopts a phased approach that is likely to overshoot the advised 2025/26 implementation target.

The challenge in calculating an all-encompassing cost is in aggregating the various pieces of information gathered from several iterations of the White Papers on NHI dating back to 2012, proposals made in the Medical Schemes Amendment Act introduced in 1998, findings of the recently commissioned Health Market Inquiry, the submission of the Davis Tax Committee and considerations of the Rural Health Advocacy project, assuming these cover all possible costs. These consultations have led to rigorous debate. The problem, however, is that they are not being held in parallel, resulting in disparate and sometimes contradictory outcomes.

This has skewed the perspective of healthcare professionals who are sceptical of the adequacy of current resources, the accreditation of practising healthcare professionals, proficiency of skills training and reimbursement mechanisms, particularly for specialist services.

Healthcare: A right not a privilege

Before delving into the numbers, context is required. The NHI debate is necessitated by South Africa's unique quadruple burden of communicable and non-communicable diseases, high levels of HIV/AIDS and injuries relative to most regions where non-communicable diseases are the primary cause of illness. According to the World Health Organisation, SA's disability-adjusted life years (DALY) – a measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death – is almost double that of developed and developing market averages (Figure 2). SA's burden has progressively worsened compared to its EM peers, increasing by 3% between 2000 and 2012. And, though there have been slight improvements in life expectancy and mortality rates, the unbalanced structure of SA's health system will not allow for these gains to be sustained.

The argument, however, is two-fold. Preventative rather than curative measures to reduce the burden of disease must be viewed alongside access to and the need for quality healthcare. Therein lies the challenge, as fragmentation of the system cannot be easily solved. A common statistic that is often quoted is that 16% of the population (9.2 million) are contracted to private medical aids.

It's no surprise then that high levels of income inequality translate into low levels of accessibility to quality and affordable healthcare. A presentation conducted by FTI Consulting[2] which compares the need for healthcare relative to the benefit derived and funding provided is a clear representation of the social divide. Low-income households (quintile 1) have the greatest need for medical services but are limited in their ability to fund quality care, resulting in marginal benefit (Figure 1).

The argument is underscored in the White Paper of 2017[3] which argues, "The benefit incidence of healthcare in South Africa is very 'pro-rich' with the richest 20% of the population [which are largely contracted to medical aid schemes or paying directly out of pocket] receiving 36% of total benefits (despite having a 'health need share' of less than 10%) while the poorest 20% receive only 12.5% of the benefits (despite having a 'health need share' of more than 25%)."

[2] Armstrong, P., Erasmus, M. and Rich, E (2017), *Benefit Incidence, Financing Incidence and Need of Healthcare Services in South Africa* (Available: econex.co.za/publications) Accessed 10 September 2019.
[3] Department of Health (2017), National Health Insurance Policy – *Towards universal health coverage* (Available: www.health.gov.za/index.php/nhi?download=2257:white-paper-nhi-2017) Accessed 1 September 2019.

Figure 1: Benefit incidence in South Africa[1]

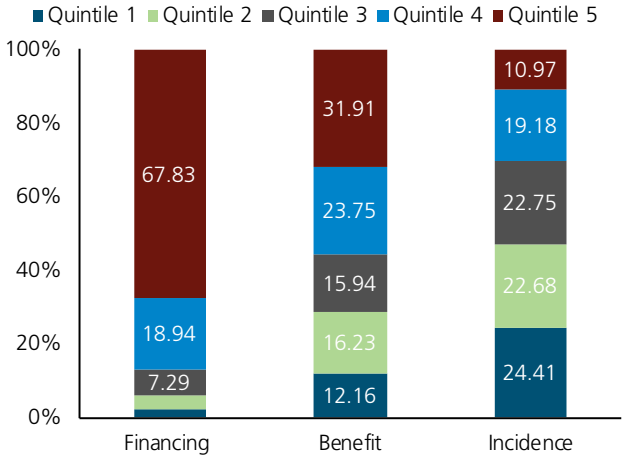
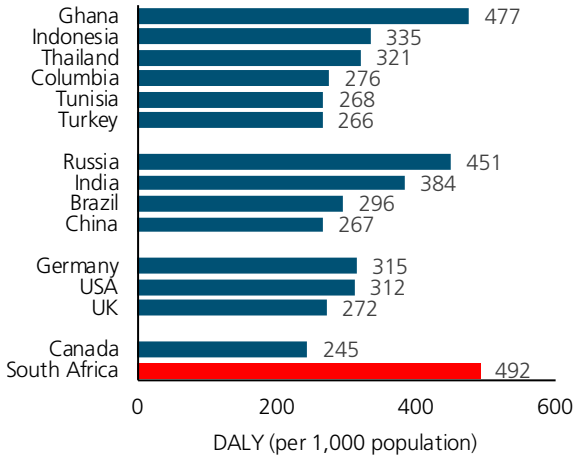


Figure 2: Comparison of disability-adjusted life years



Note:
1. Benefit incidence analysis considers the monetary value of the healthcare benefits that each quintile receives, measured by their utilisation and the associated costs. The benefit represents the extent to which people from different quintiles (where 1 = low income) benefit from total healthcare provision in South Africa. Healthcare financing is comprised of a share of total taxes, medical scheme premiums and OOP payments. Financing incidence considers each of these, as well as all three categories jointly, as a proportion of overall household expenditure.
Source: WHO, Econex, RMB Global Markets (data as at September 2019)

Is this the de facto nationalisation of the healthcare system?

The word nationalisation is an exceptionally emotive one in the current South African construct, evoking great anxiety given its links to the SARB, land reform and the mining industry. The former Minister of Health, Dr Aaron Motsoaledi's assertion that the fund will be 'like a giant state-run medical aid' scheme has heightened concerns about pervasive state control. The latter is characterised by three of the seven features of the 2017 White Paper as the centralisation of activities under the NHI, describing it as a single fund that will be publicly administered and owned:

- Integrating all sources of funding into a unified health financing pool that caters for the needs of the population;
- Actively using its power as a single purchaser to proactively identify population health needs and determine the most appropriate, efficient and effective mechanisms for drawing on existing healthcare service providers; and
- Paying for all healthcare costs on behalf of the population.

These facets of the Bill essentially confer powers onto the minister to appoint the NHI board and regulate agreements between private and public facilities to render specific services. This has created angst among medical professionals and medical aid schemes that are not in agreement with the government on its interpretation.

The reference to public administration carries with it the stigma of corruption and mismanagement, underscoring the shortcomings of the public sector in deploying capital, managing procurement and entrenching good governance. Indeed, Minister Zweli Mkhize, the Minister of Health, has publicly cited inefficient management dilapidated infrastructure, drug stock outs and staff shortages as primary deterrents to universal healthcare. One need only look as the percentage of legal claims against the Health Department in 2018 – R56bn which is equal to 30% of total government expenditure on health – to realise the extent of realignment needed in the public sector. This is further evidenced by the mixed success of the health system strengthening projects adopted in the 10 NHI pilot districts outlined in the Green Paper (2011) where a lack of human resources, shortage of equipment and infrastructural challenges weakened the provision of efficient health services, occasioning fierce criticism of the Health Department's NHI timeline.

Fight or flight

Recent studies investigating the impact of emigration on healthcare in South Africa have found remuneration of public healthcare workers to be less relevant to the decision to leave following the enactment of the Occupation Specific Dispensation[4] policy by the Department of Health in 2007, which revised salary structures to ensure fair pay. The more pertinent issue is that of policy uncertainty. The challenge for, and perhaps failing of, the ministry has been in adapting to South Africa's unique epidemiological needs and applying international best practice to improve the public healthcare system (vis-à-vis its facilities, training, infrastructure, governance etc.) to attract, grow and retain medical professionals.

The upshot is that it's impossible to unravel the push factors driving migration from how health workers perceive or experience South Africa's healthcare system and South Africa's political and economic context and policies more broadly. The economic impact, particularly if we consider that many medical professionals, principally specialists, that emigrate are of a higher earnings demographic, is a significant outflow of wealth, decline in the tax base and, critically, further erosion of the skills base (with vacancies unlikely to be filled expediently by immigrants due to the cost, dwindling critical skills list commissioned by the Department of Home Affairs and lengthy delays in registering foreign doctors).

Measuring the potential brain drain

Before assessing the impact of healthcare professionals' emigration on the fiscus, it's necessary to quantify the numbers of individuals who might leave. We caveat our analysis by assuming that the proportion of medical professionals that relocate abroad might be motivated by several pull and non-financial push factors, with the rollout of the NHI featuring prominently in their intentions to leave.

Emigration is undeniable, so how then do we quantify its impact? Migration statistics are not readily available, but anecdotal evidence points to an increasing number of individuals leaving South Africa. The evidence suggests that emigrants are middle-to-high-income individuals, which though small in number, contribute the largest proportion of personal income tax to South Africa's fiscus. FNB's most recent update of its property barometer reveals that the growth in South Africans selling their homes with plans to emigrate stood at 13.4% in 2Q19, with the behaviour more prevalent in the higher end of the market. The trend in emigration is borne out by admissions to private schools, with the ADvTECH Group reporting higher levels of withdrawals due to emigration and financial pressures.

Based on the latest health personnel statistics published in the South African Health Review of 2018[5], the country is home to 530,226 registered medical professionals. A 2018 survey published by Union Solidarity's Research Institute reveals that 25% of doctors trained in South Africa (1,200 per year), elect to leave the country. This isn't necessarily evident in the official numbers with the most recent figures on emigration from Stats SA's 2016 Community Survey, a large-scale study conducted between censuses, showing that a total of 97,460 South Africans had moved abroad since 2006. This is an average of roughly 10,000 per annum to 2018, less than half of what immigration and citizenship experts Sable International estimate as the yearly exodus of skilled professionals from SA (24,820).

If we use Sable's yearly total of 24,820 as a base and assume that 17%[6] of emigrants are medical professionals, we arrive at 4,219. Add to that the migration of newly trained doctors (25% of 1,200) and we arrive at 4,519. The

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[4] South African Government. (2007), *Public Services and Administration on Occupation Specific Dispensation: Occupation Specific Dispensation (OSD) in the Public Service* (Available: https://www.gov.za/public-services-and-administration-occupation-specific-dispensation). Accessed 10 September 2019.

[5] Health Systems Trust. (2018), *South African Health Review 2018* (Available: https://www.hst.org.za/publications/South%20African%20Health%20Reviews/SAHR%202018.pdf) Accessed 1 September 2019. The authors concede that **human resource numbers are not readily available for both public and private sectors** and rely on professional bodies for verifiable workforce figures.

[6] The percentage of members who are largely health professionals that leave Profmed Medical Aid scheme every year.

figure seems inconsequential relative to the number of registered individuals falling into the highest tax bracket (120,751) but consider that Sable has experienced a 70% increase in relocation enquiries over the past year. If we assume that an average of 23% of these queries result in the expatriation of medical professionals over the next six years, the understated emigration figure of 4,519 could easily bound to 15,202 by 2025. Considering this intensified figure, should the number of tax payers earning R1.5m or more each year grow by a constant 1.6% y/y (which is the current growth rate) over the next six years, then 11.45% (15,202) of the high-income individuals (132,817) will be lost by FY25/26 (Table 1). The importance to the NHI funding debate, therefore, lies in the corrosion of the tax base as the number of emigrants outweighs the increase in taxpayers.

Table 1: Change in tax base due to emigration

Financial year	% increase in number of individuals within the high-income tax bracket	Number of tax payers	% of medical professional emigrating annually	Number of medical professionals leaving South Africa	% loss of high-income tax payers
2019/20		120,751		4,5,19[1]	3.74%
2020/21	1.6%	122,683	20%	5,423	4.42%
2021/22	1.6%	124,646	25%	6,779	5.44%
2022/23	1.6%	126,640	30%	8,813	6.96%
2023/24	1.6%	128,667	25%	11,016	8.56%
2024/25	1.6%	130,725	20%	13,219	10.11%
2025/26	1.6%	132,817	15%	15,202	11.45%

Note:
1. 4,519 = 17% of 24,820 annual emigrants plus relocation of 300 newly trained doctors
Source: National Treasury, RMB Global Markets (data as at September 2019)

Joining the dots

The fiscal implications of emigration are two-fold.

Firstly, there is a running cost that NT must bear during the three stages of phased enactment including allowances for the restructuring of health expenditure, with emphasis on the reprioritisation of budget to the retention and recruitment of skilled medical professionals. Given that compensation of employees is Treasury's largest expenditure component, the absorption of private healthcare workers into the government's healthcare payroll (which totalled R856,263,000 for the year ending March 2018 as per the Health Department's annual report)[7] will restrict its ability to trim the wage bill in the short-term. At a time of limited revenue growth and rising debt obligations, NT must prioritise its policy objectives. This serves as yet another reason to defer implementation of the Fund, pushing the timeline for NHI beyond 2025.

Secondly, the revenue implication, which we consider in more detail, will be evident in the tax base from which NHI funding will be largely sourced. Once established, NT purports that general revenue and existing conditional grants which currently fund personal health services could form the basis of the NHI capital pool. But, financing the shortfall estimated in the Green Paper (and quoted in subsequent White Papers) will require revenue over-and-above budgeted allocations, with tax credits and increases in VAT, payroll tax on employers, surcharges on taxable income or a combination of the three, considered the most viable funding alternatives.

[7] Department of Health (2017/18), Annual report (Available: http://www.health.gov.za/index.php/2014-08-15-12-56-31?download=2924:annual-report-2018) Accessed 10 September 2019.

NT is expected to release a working paper outlining various options. Its calculations are likely to update the estimates extracted from the Green Paper and presented by the Director General in 2016[8] due to:

- Utilisation assumptions not increasing at the rate envisaged for both primary healthcare and hospitals;
- Further consideration of the health system's absorptive capacity and personnel requirements;
- The widening gap between actual Medium-Term Expenditure Framework and NHI costing numbers as actual fiscal outcomes had deviated from expectations; and
- The underperformance in economic growth and its dampening on social expenditure programmes, which would require the recalibration of the 2025/26 target of R255bn and its associated tax requirements.

Anticipating the actual cost of the NHI project is beyond the scope of this document. We have simply updated the projections of NHI costs adapted from the Green Paper by inflation to gauge the impact of emigration on the shortfall. Even if we consider the Green Paper's most conservative growth estimate of 2% per annum from FY2011/12, our inflation-adjusted shortfall in FY2025/26 is 35% higher and exceeds R165bn (Table 2).

Table 2: NHI expenditure projections (real 2010/11)[1]

		Average annual increase	Cost projection per 2011 Green Paper (Rm) (2010 prices)	Inflation adjusted cost projections (Rm) (2019 prices)[1]
Baseline public health	2010/11		109,769	109,769
Projected NHI expenditure	2015/16	4.1%	134,324	201,291
	2020/21	6.7%	185,370	278,386
	2025/26	6.7%	255,815	385,007
Funding shortfall in 2025/26 if baseline increases by x% **GDP growth**:		2.0%	108,080	165,393
		3.5%	71,914	110,007
		5.0%	27,613	42,228

Note:
1 Cost projections for 2019 assume 5.3% medical inflation
Source: National Treasury, RMB Global Markets (data as at September 2019)

Assuming tax rates for individuals expressed in Table 3 remain unchanged for the next six years (and fiscal drag relief is applied), the number of registered tax payers grow at 1.6% p.a. and the highest income bracket maintains a 14% contribution to total taxable income, the annual migration rates calculated above (of between 4,519 and 15,202) will reduce personal income tax receipts (Table 4) by between R5.2bn (2.5%) and R23.3bn (11%).

[8] National Treasury (2016), *Balancing the NHI funding requirements with the economic capacity of South Africa* (Available: https://ffc.co.za/docman-menu-item/nhi-colloquium/1092-balancing-the-nhi-funding-requirements-with-the-economic-capacity-of-south-africa) Accessed 1 September 2019.

Table 3: Estimates of individual taxpayers and taxable income, 2019/20

Taxable bracket (R000)	Registered individuals (Number)	Taxable income (Rbn)	Income tax from medical tax credits (Rbn)	Income tax payable after proposals (Rbn)
R0–70	6,369,806	183.4	-	-
R70–150	2,385,046	254.0	0.05	10.1
R150–250	1,949,150	387.4	0.20	36.2
R250–350	1,169,590	349.9	0.21	49.7
R350–500	984,790	408.5	0.23	76.0
R500–750	610,331	367.1	0.15	89.2
R750–1 000	261,631	224.7	0.07	66.2
R1,000–1 500	161,868	193.9	0.05	65.8
R1,500+	**120,751**	**362.7**	**0.04**	**159.8**
Total	**7,643,157**	**2,548.1**	**1.0**	**552.9**
Grand Total	**14,012,963**	**2,731.5**	**1.0**	**552.9**

Source: National Treasury (data as at September 2019)

Table 4: Tax loss by FY2025/26 due to emigration of affluent medical professionals

Financial year	Registered individuals (number)	Taxable income assuming R1,500+ bracket contributes 14% to total taxable income (Rbn)	Income tax payable assuming tax rate remains unchanged (Rbn)	Tax credits assuming all registered tax payers are members of a medical aid and receive R310 p.m. (Rbn)
FY19/20 (actual)	120,751	362.7	159.8	0.45
FY25/26 (estimated)	136,629	481.0	211.9	0.51
FY25/26 (4,519 emigrants)	*133,227*	*469.2*	*206.7*	*0.50*
FY25/26 (15,202 emigrants)	*122,943*	*428.1*	*188.6*	*0.46*

Source: National Treasury, RMB Global Markets (data as at September 2019)

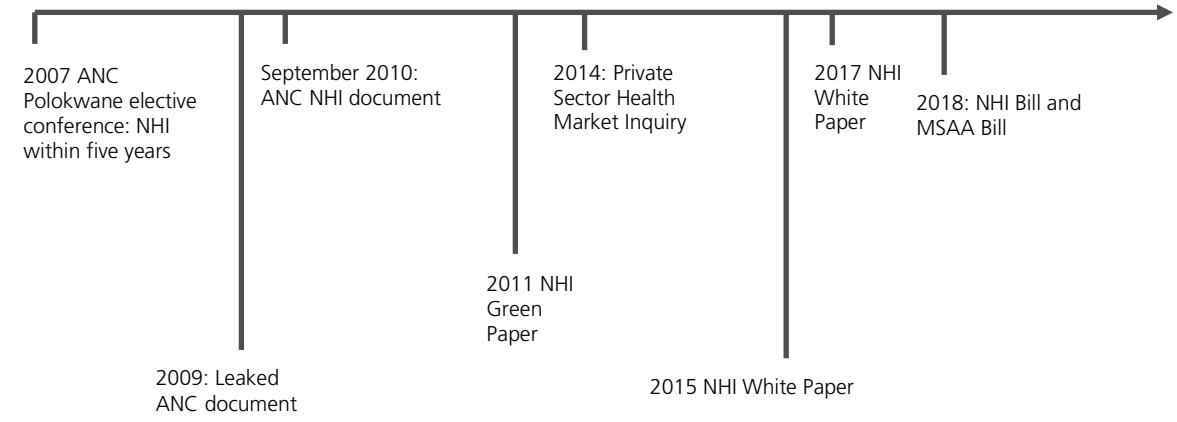
The range is simply based on income tax and does not account for VAT payable by medical professionals. This implies that the emigration of affluent medical professionals would require further tax increases (to those proposed in the scenarios presented in the Green Paper) to compensate for the loss of revenue[9].

The upshot is that without adjustments to domestic taxes, medical tax credits outlined in Table 3 will be grossly insufficient to fund the inflation-adjusted NHI funding shortfall of R165.9bn calculated in Table 1. We're mindful that the rise in emigrations of high-income medical professionals has the potential to generate a short-term increase in revenues for the government from capital gains tax accrued on the sale of investment holdings; however, it will be countered in the long run by permanent damage to the tax base, which will impair revenue growth in an already depressed macroeconomic environment. The outcome of our analysis might seem marginal, but the cumulative impact of emigration on skills development and the reduction of financial risk to the population is devastating to the primary objective of the NHI which is to provide quality healthcare. Therefore, it's necessary that healthcare workers' experiences and understanding of healthcare reform improves, which will require open engagement with the Department of Health and NT.

[9] The total would also vary depending on the number of tax payers that advance to the highest tax bracket over the next six years.

Appendix

Timeline of policy developments in healthcare sector



Source: FTI Intelligence

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