

Assessing Health Policy Implementation in South Africa:
Case Study of HIV Universal Test and Treat

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Abstract

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Successful policy implementation is dependent upon implementation planning at all stages of the policy process. Addressing implementation barriers at the subnational level is fundamental to achieving the Republic of South Africa's national health targets, such as UNAIDS' 90-90-90 targets. Semi-structured interviews were conducted with 55 staff across four purposefully selected provinces and districts in South Africa to explore facilitators of and barriers to implementing national health policy. The interviews further assessed barriers to implementing South Africa's Universal Test and Treat (UTT) Strategy for HIV Positive Patients and Differentiated Care for Stable Patients policy. Thematic analysis of the coded interviews identified ten key factors affecting policy implementation at the subnational level; four factors relating to the decentralized policy context and six factors relating to the elements of effective policy implementation. Specific to UTT, participants expressed challenges in interpreting policy details and providing quality care in the face of staff shortages and an increased uptake of HIV testing services. Strengthening elements of effective policy implementation to attain national

health goals demands commitment and motivation at all levels, from national leaders to frontline implementers. To address the key factors affecting policy implementation in the decentralized context, six strategies are proposed: maximize integration of health policies across programs; model implementation timelines and resources during policy development; strengthen consultations with subnational governments and frontline implementers during all stages of the policy process; develop standardized processes to improve access to policy documents; strengthen training systems for policies; and establish feedback loops to address implementation barriers as they arise.

Introduction

Strong national policy frameworks, implementing guidelines and implementation plans are fundamental to achieving national health targets. Successful policy implementation depends on proactive implementation planning at all stages of the policy process. Policies too often fail to fully reach their intended outcomes when policy implementation planning does not receive sufficient attention.

Planning for implementation throughout the policy process requires a strategic focus during policy development, drawing on the practical experience of those who will implement the policy, identifying potential barriers, and feeding this knowledge back into the policy development process.¹ The policy process is often depicted as a five stage process (see Figure 1) consisting of identifying a public health problem, developing a policy intervention(s), adopting a policy, implementing a policy, and evaluating a policy.²⁻⁴ A lack of adequate consideration of potential implementation barriers at each stage can undermine successful implementation or lead to unintended, negative consequences.

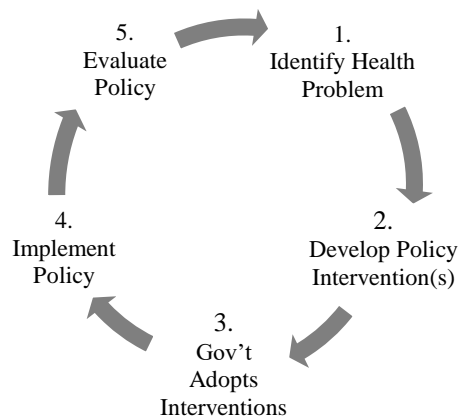


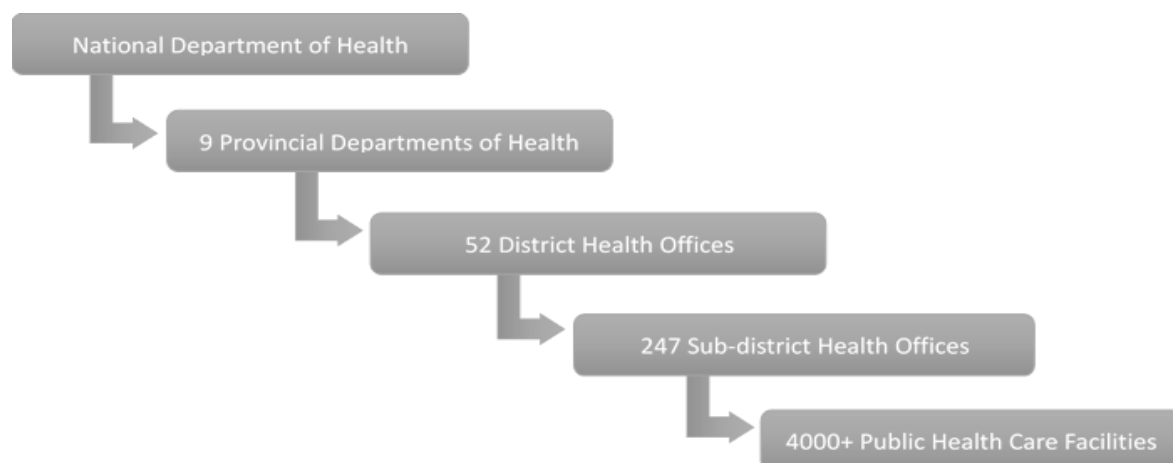
Figure 1: Policy Development and Implementation Process

Strengthening policy implementation requires political will and committed leadership to address health system implementation barriers at the national and subnational level.⁵ The National Department of Health of the Republic of South Africa (NDoH) partnered with the University of Washington International Training and Education Center for Health (UW/I-TECH), the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the U.S. Human

Resources and Services Administration, and the U.S. Centers for Disease Control and Prevention

(CDC) to improve the quality of NDoH policy processes and strengthen policy implementation. As a decentralized political system, the autonomous functions and responsibilities of the national, provincial, and district health systems in South Africa are outlined in National Health Act, No. 61 of 2003 (See Figure 2). NDoH is the central governing body responsible for identifying national health priorities and is responsible, through the National Health Council (NHC), for adopting policies that will protect, promote, improve, and maintain the health of the population.⁶ The National Health Council is composed of the Minister of Health, Directors-General of national departments, and relevant members of the Executive Council- including the heads of the provincial departments. Nine provincial Departments of Health are responsible for ensuring implementation of national health policies and the relevant provincial health policies.^{6, 7} Health care delivery and policy implementation are further organized through a district and sub-district health system. Each district is responsible for the development of a district health plan that supports the implementation of national and provincial health policies.⁶ As national and provincial policies are disseminated through this tiered hierarchy, sustaining attention for proactive implementation planning and identifying implementation barriers is critical for implementation success.

Figure 2: South Africa's Decentralized Health System



Strengthening policy processes to improve implementation planning is important for ensuring that South Africa attains objectives in priority programs, such as HIV/AIDS. Effective 1 September 2016, South Africa was among the first countries in Africa to formally adopt Universal Test and Treat (UTT) in accordance with the World Health Organization (WHO) guidelines on HIV treatment, which calls for initiating anti-retroviral therapy (ART) regardless of CD4 count.⁸ Effective implementation of UTT is key to the success of UNAIDS 90-90-90 targets that strive for 90% of all people living with HIV know their HIV status, 90% of people with diagnosed HIV infection receive sustained ART, and 90% of all people receiving ART have viral suppression. In line with UNAIDS, NDoH aspires to achieve the 90-90-90 targets by 2020.⁹ This manuscript explores facilitators of and barriers to implementing health policy in South Africa and uses NDoH's Universal Test and Treat Strategy for HIV Positive Patients and Differentiated Care for Stable Patients policy as a case study. Facilitators of and barriers to implementing health policies include a range of factors concerning the decentralized health system, policy development, policy awareness and understanding, human resources, financial and material resources, and monitoring and evaluation. In this study, 'policy' refers to any policy, strategy, guideline, standard operating procedure, circular or other written directive that guides the activities of the health system. 'Subnational' refers to all levels of the decentralized health system: provincial, district, sub-district, hospital and primary health care facility, except where specified by the text.

Methodology

Semi-structured interviews were conducted with 55 participants across four provinces in South Africa to capture a range of perspectives and experiences across different policy roles, including

a range of experience with UTT. Provinces and districts included: North West province, Ngaka Modiri Molema district; KwaZulu-Natal province, uMgungundlovu district; Eastern Cape province, Amathole district; and Western Cape province, Eden district. Provinces were purposefully selected based on PEPFAR-CDC priority and geographic diversity. Districts within the selected provinces were purposefully selected to manifest a range of PEPFAR-CDC priority, proximity to the provincial capital, socio-economic quartile, population density, and HIV testing coverage.¹⁰ Amathole, uMgungundlovu, and Ngaka Modiri Molema districts were classified as PEPFAR ‘priority’ districts because of their high HIV burden and high level of financial support received from PEPFAR. Eden district was considered a ‘transition’ district because they have less burden of HIV and PEPFAR transitioned financial support out of Eden district. Selected provinces and districts are presented in Table 1 and Figure 3.

Table 1: Demographics of Selected Districts

Province	District	District Support Partner(s)	Agency: PEPFAR Status	Provincial Capital in District	Socio-Economic Quartile*	Population density**	HIV testing coverage***
Eastern Cape	Amathole	TB/HIV Care Association	CDC: Priority	No	1	41.4	60.2
Kwa-Zulu Natal	uMgungundlovu	Health Systems Trust/Kheth'Impilo	CDC/USAID: Priority	Yes	3	116.1	41.3
North West	Ngaka Modiri Molema	Aurum Institute	CDC: Priority	Yes	2	30.8	32.8
Western Cape	Eden	-	CDC: Transitioned	No	4	25.9	36.8

Data from 2015/2016 District Health Barometer. * Socio-Economic Quartile of district based on South African Index of Multiple Deprivation Worksheet for 2011. **Population Density measured as Total Population/Area (sq. km). ***HIV testing coverage includes ANC, measured as HIV test client 15-49+ Antenatal client HIV 1st test/Population 15-49 years.

To understand the influences on implementation across the tiered hierarchy of the health system, participants were purposefully selected from provincial departments of health, district health

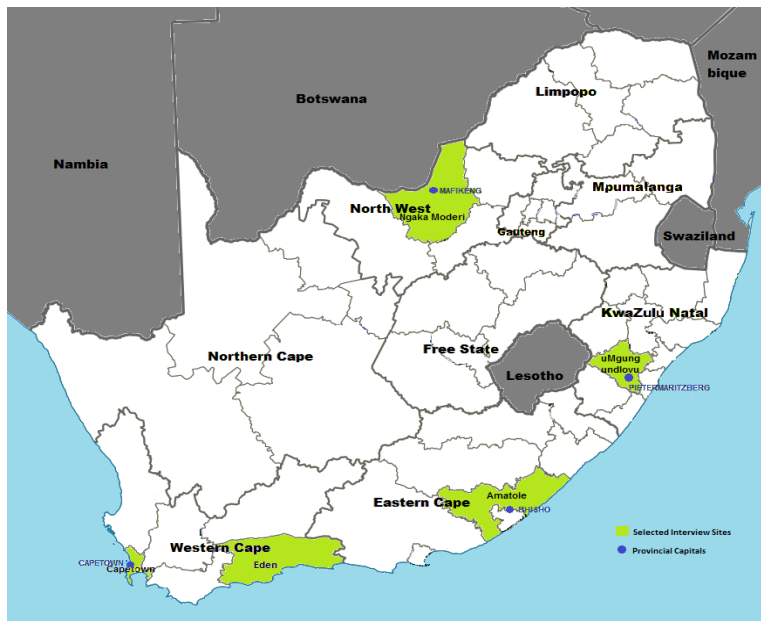
offices, sub-district health offices, regional hospitals, and primary health care facilities. Table 2 illustrates the sample selection and study population.

Table 2: Sample Selection and Study Population

Sample Size (n=55)	Study Population
Province (n=13)	HAST* manager M&E manager Policy and Planning manager Health Programs/PHC manager Quality Assurance manager Regional Training manager
District (n=12)	District Health manager HAST manager TB programme manager Health Programs/PHC manager
Sub-district (n=10)	Sub-district manager HAST coordinator PHC coordinator Clinical supervisor M&E officer
District/Regional Hospitals (n=9)	HAST coordinator Nursing coordinator M&E coordinator Quality Assurance coordinator
PHC facility (n=11)	Facility Operations manager Clinical Nurse Practitioner Professional nurse

Participant job titles vary slightly across provinces. *HIV/AIDS, STI, and TB (HAST)

Figure 3: Map of Selected Districts



Interview materials were developed based on an extensive literature review on best practices for effective health policy systems and were piloted during the North West Province interviews. Interviews were conducted in English by Orange E, and detailed interview notes were captured by Mazibuko S. Interview notes were supplemented and verified by audio recordings, then agreed upon by the interviewer and note taker. The interviews lasted between 27 minutes and 1 hour 18 minutes and were conducted during August and September 2017. Ethical clearance was obtained from the University of Washington Institutional Review Board, the CDC Center for

Global Health- Human Subjects Review, and the Human Subjects Research Council of South Africa.

Following the completion of the interviews, data were thematically coded in Atlas.ti based on inductive and deductive methods. Themes and codes of four interviews were compared and agreed upon to enhance coding reliability; the remaining interviews were coded by the first author. Thematic triangulation occurred on an ongoing basis during the data analysis period.

Results

Thematic analysis of the study data identified ten key factors affecting policy implementation at subnational levels in South Africa. The results are arranged into factors relating to the decentralized policy context and the elements of effective policy implementation. Factors affecting the implementation of South Africa's Universal Test and Treat policy are presented as a case study.

Decentralized Policy Context

South Africa's political system – a national government, nine autonomous provinces, 52 districts, and 247 sub-districts – strongly influences policymaking and policy implementation and ultimately outcomes of national health policies. We identified four specific factors of the decentralized policy context as barriers to policy implementation: lack of policy integration; provincial adaptation of national policies; poor alignment between expected implementation and

10 Key Factors Affecting Policy Implementation

Decentralized Policy Context

1. Siloed policy development and lack of policy integration
2. Provincial adaptation of national policies
3. Poor alignment between expected implementation timelines and annual planning
4. Inconsistent input during policy development leading to a lack of buy-in

Elements of Effective Policy Implementation

5. Implementers often lack access to final policies
6. Insufficient understanding of policy details
7. Need for implementation guidance and support
8. Insufficient and overburdened human resources
9. Lack of financial and material resources
10. Gaps in monitoring and evaluation

annual planning; and inconsistent input during policy development. Provincial adaptation of national policies was also identified as a facilitating factor of policy implementation in the decentralized policy context.

1. Siloed policy development and lack of policy integration

Participants reported that a lack of collaboration across health programs and lack of policy integration, at the national and provincial levels, creates challenges in managing the competing priorities of various policy directives. Frontline implementers, individuals providing patient services including professional and specialized nurses, are expected to know and implement policies across various programs. These individuals expressed feeling overburdened by the volume of siloed information. Vertical program planning and policy development was reported to result in an overwhelming number of new policies for frontline implementers. Disjunction between vertical programs was reported to result in overlapping demands on timelines and resources, and occasionally to contain inconsistent guidance on service delivery.

“You have incredibly vertical things coming down. We have a small attempt to try and put together the different things, but then every single one of these policies goes out to one person in the health facility who has to accept all the different things that come flooding. It is not aligned with each other. So you will have four different registers where if you had done a little bit of work, if people had sat around a table together, they could have combined that into one single register. And it is the one person at the end who has to receive all four.”

2. Provincial adaptation of national policies

Following adoption of a policy at the national level, provincial departments of health review policies and occasionally adapt them to align with the provincial setting. The ability to adapt policies was reported as a facilitator of policy implementation, as provincial departments of health can adjust processes, structures, roles and responsibilities, and resources, to fit the local context.

The level of specificity however— sometimes too little, sometimes too much – in NDoH policies can also create implementation challenges. Participants at the provincial level indicated that some NDoH policies are inflexible in accommodating for geographic diversity, population size, and the priorities of the province. Strict policies are difficult to implement as the realities on the ground may not align well with the policy guidance across all provinces. Conversely, NDoH policies which lack clarity in policy details can lead to significant variation in policy implementation across provinces. Ambiguous policies are difficult to implement as the interpretation of a policy component can vary significantly across users, changing the intended outcome of the policy. When policy implementation significantly varies across users and provinces, it can be challenging to assess if the policy is successfully meeting its intended goals. When a discrepancy between national policy and an adapted provincial policy exists, participants at the lower-subnational levels collectively reported following the provincial policy. Some respondents stated that clarifying NDoH policy components and implementation expectations could promote better alignment of provincial policies.

“For something that is going to be implemented at community level, the national policy must really spell out what needs to be done. That is why you end up having to adapt them at our level, so that people at the implementation level can have the same understanding that the policy intends to drive.”

3. Poor alignment between expected implementation timelines and annual planning

National policies adopted with an implementation timeline that does not align with provincial annual performance plans are more challenging to implement. Provincial annual performance plans identify implementation priorities for the upcoming year, including planned policy initiatives, budget expenditure estimates, and performance targets. Annual performance plans are developed to keep provincial activities in line with national development plans and strategic

frameworks. Participants who engage in planning for policy implementation expressed challenges in reallocating resources for policies that are not already incorporated into annual plans and budgets. They expressed concern that reallocating resources outside of the regular planning cycle can compromise the coverage and quality of both previously planned activities and newly adopted policies.

“Planning is a methodical process. When an unexpected mandate comes out as a result of a mid-year meeting or something that has happened, and it descends upon you, you move other priorities aside. You have already dedicated your existing resources, now you have to reroute them. And I don’t know if people realize what they are asking you to do when they make those decisions. There is a plan that was put in place and is focusing on the cutting-edge problems on the ground, now you bring more problems.”

4. Inconsistent input during policy development leading to a lack of buy-in

Participants emphasized that input from subnational units is inconsistently sought while drafting national and provincial health policies. Although provincial program managers reported providing input on drafts of NDoH policies, frontline implementers and policy champions at the district, sub-district, and facility level reported rarely being engaged in policy development.

Participants at the lower-subnational levels desire to provide input on implementation feasibility and workload, community acceptance, and rationale of the policy.

“It needs a joint effort, because some issue[s] will only be realized by the people at the front levels, so you have to make sure it is realistic for them. It’s a group decision, not only the province.”

The perceived disconnect between policymakers and subnational implementers during policy development was reported to subsequently cause a lack of buy-in from frontline implementers to implement activities in accordance with the policy. Frontline implementers expressed negative attitudes towards policies about which they were not consulted, and they often perceive such policies will adversely impact service delivery.

Elements of Effective Policy Implementation

Availability and access to resources and support during policy implementation are foundational to effective policy implementation.¹ In addition to the four decentralized policy context factors described above, we identified six factors as barriers to effective policy implementation: lack of access to final policies; insufficient understanding of policy details; need for implementation guidance and support; insufficient and overburdened human resources; a lack of financial and material resources; and gaps in monitoring and evaluation. Implementation guidance and support was also identified as a facilitating factor for effective policy implementation.

5. Implementers often lack access to final policies

Although many new policies are commonly promoted through the media and discussed during internal meetings, participants reported that copies of policies are often not disseminated in a timely or consistent manner. Poor policy dissemination results in a lack of access to final policies for essential staff. A few subnational units reported receiving policies from program teams at a higher level of government or from the responsible program manager at their level of government. Other subnational units reported being instructed to wait for policies to be communicated through the Head of Department. Some participants at the sub-district level reported receiving policies from as many as three different people, while others reported often having to ask for copies of policies they learned about from the media or colleagues.

Policies are commonly communicated through email to subnational levels and made available on a provincial intranet system, except where internet connectivity is a concern. The responsibility for printing and distributing hard copies of policies varies across provinces, districts, and sub-districts and by type of policy. Guidelines in the form of workstation books are commonly printed at the province and disseminated to district offices for the facilities. Circulars and policy

directives that may be an addendum to a previously printed guideline are commonly printed at the district or sub-district level. Participants reported that often not enough copies of policies are made available for each frontline implementer to have a copy at their workstation, causing several participants at the facility level to use their own resources to make copies. Participants will also seek support from implementing partners to print policies when resources are limited. When electronic or hard copies of policies are unavailable or difficult to find, many participants reported using 'Google' to find policies, which occasionally leads to the use of policies from other provinces or countries. Participants also report not knowing whether the policies they found online were the most recent version of the policy.

“At times, we know we are supposed to have that policy, but we don't have, so we will download one from the internet, so that we can have. We bind it ourselves. It is only in the case of new policies that have not been printed for us that we have those problems. It can be made available, but we find, such that, each and every consulting room does not have.”

6. Insufficient understanding of policy details

Participants described a wide variation in the type and frequency of and participation in trainings on policy details. At the provincial and district level, staff are often engaged in meetings, trainings, and policy roadshows to interpret and explain policy expectations. At the sub-district and facility level, however, individuals are often less involved in activities that help them understand the details of and rationale behind the policy. Some participants reported receiving a copy of the policy, which they read with their staff to agree upon a shared interpretation of the required actions. Most frontline implementers reported that they are expected to sign the facility's copy of the policy to indicate having received policy orientation, but their understanding of the policy details is not tested or validated prior to signing the policy.

When need and resources arise, formal trainings on new policies for prioritized staff are

integrated into a training schedule with the regional training centers. Trained staff are expected to then train their fellow implementers in a cascading “Training of Trainer (TOT)” approach. Participants emphasized that the TOT model often fails when trained staff do not fully understand the policy details, or they are too overburdened with the workload upon returning to the facility to provide adequate training to their peers.

“We rely a lot on training one person and then they will train others. But the people we use as information carriers or trainers are not employed as trainers, they are not employed to communicate messages. There is a big assumption that if you train someone they will have an interest in giving information to others when they go back, when it is not their job and they are not being evaluated on it, there is no accountability mechanism for that. That is a big failure.”

Frontline implementers reported that standard operating procedures (SOPs) and workstation aides make policies easier to understand and implement. Primary health care providers placed a greater emphasis on understanding policies that are incorporated into the Primary Care 101 workbooks, as this information tends to be the most relevant to their daily operations. Facility operations managers place a greater emphasis on understanding policies required for compliance with the National Core Standards and Ideal Clinic certification, as they tend to be audited more frequently on these policies.

7. Need for implementation guidance and support

Sub-district primary health care coordinators and facility operational managers play key roles as policy champions for providing direct implementation support to frontline implementers. When implementation is unclear or challenging, participants at the frontline reported first seeking guidance from these individuals. At the sub-district, district, and provincial levels, participants reported seeking guidance from program managers at a higher level of government, from program managers in neighboring sub-districts, districts, or provinces, or from local doctors,

academic experts, and implementing partners. The presence of an identified policy champion, from whom implementers' feel comfortable seeking guidance and support, was reported to make policy implementation more successful.

“I work as an operational manager, but I am hands on. I have to make sure that everyone is doing the policies. We have to read the policies, discuss it, and monitor if they are implemented. They come to me with questions.”

Guidance received on policy details influences the implementers' interpretation and subsequent implementation of the policy. The absence of a policy champion, or a policy champion who does not have a strong understanding of the policy, was reported as a barrier to successful implementation.

“I don't know if they have one dedicated policy person or V.I.P. type person from district or province. I don't know of one. So where I have a challenge, via my manager, it would be nice to get support from that person- there is a lacking in that area.”

Some participants expressed frustration when implementing partners have better access to policy documents and more knowledge of policy implementation procedures than government employees. Some participants stated identifying a policy champion at each level of government to support implementation would improve overall knowledge and implementation of policies.

8. Insufficient and overburdened human resources

Staffing shortages, resulting in increased staff workloads and high burnout rates, was described by participants as one of the largest barriers to successful policy implementation. Most facilities operate below staffing norms and struggle to cope with the increased workload new policies often bring.^{11, 12} Policies that increase the number of services provided by frontline implementers or that require additional reports be compiled, without providing additional staff, may decrease the quality of the services frontline implementers provide. Frontline implementers reported feeling rushed while caring for a patient because of the pressure to tend to all of the waiting

patients. Some acknowledged that this occasionally required them to not follow policies as they are intended.

“The staff need to be able to see that it is doable. People do not adhere to the policy if they are short staffed, they tend to make short cuts. You know it, but you rush to do the work, because you have a load of work to do and lots of people waiting. People are working so hard, but the shortage makes it never easy.”

Staffing shortages also affect policy processes and implementation monitoring at the sub-district, district, and provincial levels. For example, a shortage of human resources reduces the ability for M&E officers to collect and report high quality data. District and regional hospitals, which function as ‘mother sites’ to support sub-district staff, face continuing challenges in mentoring referral facilities due to high workloads at the hospital. And primary health care supervisors, generally responsible for providing guidance to and supporting implementation in up to ten sites, reported being assigned 14-25 facilities at a time due to staff shortages.

9. Lack of financial and material resources

A lack of financial and material resources across all subnational levels was reported to impede the success of policy processes, including dissemination, training, implementation, and monitoring. Reported resource shortages include medical stock and equipment, infrastructure, copies of policies and work aids, and connected reporting systems. Where shortages exist, patients are often referred to other facilities or asked to return when the supplies are secured. This results in long queues for services, the loss of patients in the referral process, and policies not being implemented in accordance with the guidelines.

“There is not enough resources, for example, we sometimes run out of stock supplies. We then juggle around and take from those who have. It requires planning to go to main depot to ask for more.”

10. Gaps in monitoring and evaluation

Policy implementation is often monitored at subnational levels through routine collection of District Health Information Systems (DHIS) and Three Interlinked Electronic Registers (TIER) indicators and performance target achievements. How policy is implemented compared to the policy directive and the effects of policy implementation, however, are rarely assessed in formal evaluations. This highlighted gap in monitoring and evaluation creates a barrier for identifying and addressing policy implementation bottlenecks.

Participants additionally reported that monitoring and evaluation tools often lag behind policy adoption and dissemination, creating barriers for reporting on new policies. When updated M&E tools are not disseminated, subnational staff reported creating their own monitoring tools, usually audit checklists and tick sheets. The frequency of monitoring policy implementation - monthly, quarterly, or annually- varied by subnational unit and policy priority. This inconsistency in monitoring and evaluation creates challenges in determining successful policy implementation.

“...if we keep on changing standards at frequent intervals, people don’t catch up easily, and you find measuring implementation becomes very weak. For example, the systems we use to monitoring our data will not communicate with the policy. When you go to monitor, you will have a problem. If the guideline changes from six weeks to birth, but our reporting system still says six weeks, for that year you will be struggling with that indicator and you will be having difficulty measuring it.”

Universal Test and Treat

In line with the National Development Plan 2030, the UN Sustainable Development Goals, and UNAIDS 90-90-90 targets of 2020, the South Africa Minister of Health announced on 10 May 2016 a national shift to Universal Test and Treat, calling for all HIV positive children, adolescents, and adults to be offered ART regardless of CD4 count.⁸ The previous ART guidelines, adopted in 2015, called for initiation of HIV positive patients at a CD4 count of 500 or less.¹³ The Deputy-Director General for HIV/AIDS, TB, and MCWH signed the national UTT

circular on 23 August 2016, followed by the Deputy-Director General for Health Regulation and Compliance Management on 31 August 2016. Effective from 1 September 2016, the national circular outlines the eligibility criteria for starting patients on lifelong ART, timing of ART initiation, and options for differentiated care for stable adult patients.

Provincial adaptations of the national circular varied across the four provinces in the study. North West and Eastern Cape provinces adopted the national circular as it was received. In Western Cape province, changes to the circular include: revisions to the section on clinical monitoring which references studies of adverse side effects; provincial specific recommendations for differentiated models of care for stable ART clients; inclusion of targets; and a high-level summary of a decentralized training plan. In Kwa-Zulu Natal province, the circular was adapted into a provincial Standard Operating Procedure that emphasizes: ART initiation at the first visit; counseling steps to prepare for initiation on ART; psychosocial indicators of readiness for ART; and a test and treat algorithm.

Consistent with key factor 2 (provincial adaptation of national policies), the ambiguity of detail in the national circular regarding timing of ART initiation resulted in differing interpretations by the provinces. The national circular states ‘ART should be started as soon as the patient is ready and within 2 weeks of the CD4 count being done.’⁸ In Kwa-Zulu Natal, a provincial revision of the policy interpreted this to mean initiation should take place on the same day of testing. Frontline implementers reported strictly following the provincial guidance, despite initial confusion during the dissemination of the policy.

“The national policy was developed then the provincial one was developed and disseminated very well. The big gap was there was a lot of room for interpretation of the national policy, and now there is a mark difference between national and provincial policy in terms of initiation timing. Is it as soon as possible or same day? There was tension between provincial and national training people in terms of the messages given

during training- some were told to wait for test results, other were told not to wait.”

The Western Cape provincial interpretation of the policy places an emphasis on determining if the patient is ready for treatment. Frontline implementers mentioned that ART initiation had not significantly changed from the previous guidelines, as most patients are not ready to begin treatment within two weeks.

“If they are ready, we don’t refuse. But most patients are not ready. They need counseling first to understand this is a lifelong treatment.”

Along with these findings, participants in all provinces mentioned that a lack of clarity in the title ‘Universal Test and Treat’ created confusion while preparing for implementation. Participants felt uncertain if they were supposed to test every patient for HIV, test every individual in the catchment area for HIV, or treat every HIV positive individual.

In alignment with key factor 3 (poor alignment between expected implementation timelines and annual planning), subnational governments and frontline implementers expressed concerns regarding the capacity to manage the increased demand for HIV services associated with the UTT policy. This concern was further complicated by the delayed dissemination of the policy. Although engaged in planning activities a month prior to implementation, participants at the provincial level reported receiving the final national circular one day before implementation was to begin. At the district, sub-district, and facility level, participants reported receiving the provincial policy up to two months *after* implementation was to begin. Participants described not having enough time to properly plan for implementation or to reallocate necessary resources required to implement the policy. As a result of these concerns, one provincial department of health decided to delay implementation of this policy until the following fiscal year so resources could be properly aligned with the annual plan.

“We definitely bought into the concept of UTT from a policy perspective. But the problem was, general speaking, policies come from NDoH very late and we are expected to implement the following day. We knew it was supposed to start happening, but it took a while to get the specifics. There was very little time to do things properly and translate this policy. [The province] decided to delay this policy because it did not come with funding. For us as a province, it came a time when we had a shortfall of drugs... We were reluctant to roll out the policy too quickly because we were not sure of our funding envelope.”

Participants expressed challenges in providing quality care in the face of staff shortages and an increased uptake of HIV testing services, consistent with key factor 8 (insufficient and overburdened human resources). Most frontline implementers perceive the UTT workload allows less time for providing adequate counseling on ART adherence. Several participants reported that the reduced time allocated for adherence counseling, especially for patients with a high CD4 count, may contribute to high defaulting rates. This discourages frontline implementers from initiating patients on ART who they perceive are not ready. A few participants reported believing that most patients are not ready to begin treatment on the same day they learn their HIV status.

“When you start immediately and they are not feeling ill, people will not continue to take the meds because they have not been properly educated on ARVs. Would you take them if they made you feel sick, when you are feeling well when you came in? Hence people do not continue to take them and our defaulting rate becomes poor.”

A few frontline implementers also revealed that they delay ART initiation if they have concerns regarding drug side effects or drug resistance. Some staff at the provincial and district level believe these concerns may be a result of not consulting frontline implementers or the community during the development of the UTT policy and improper training following UTT adoption, in line with key factor 4 (inconsistent input during policy development leading to a lack of buy-in) and key factor 6 (insufficient understanding of policy details).

“It shouldn’t be, but clients are counseled according to clinician perspective. If a clinician understands UTT they will start treatment, if not they will just affirm the patient is not ready. It’s not been easy- some clinicians believe ARVs are toxic. We still have those not buying in to the idea of treatment at any CD4.”

Participants expressed challenges decanting patients onto differentiated models of care. A few participants noted that patients are difficult to track because they are frequently moving, while others noted that patients are difficult to track due to difficulty navigating patient databases. One participant expressed a need for alternative models of care from those proposed in the UTT policy.

“UTT asks us to decant the stable patients and we have already decanted 40% of our patients in the community based platform. We need different strategies. What was proposed we have already done and it has only taken us to this point.”

Consistent with key factor 10 (gaps in monitoring and evaluation), delayed registers for reporting on UTT resulted in many districts creating their own monitoring tools to meet the immediate reporting demands of the provincial and national government. Many subnational units expressed not having enough time to engage in the results of M&E efforts due to other workload demands. While electronic tools, such as TIER and DHIS2, were reported as beneficial for tracking defaulting patients, they were also described as adding to staff workload.

Discussion

Supported by the case study on UTT, our findings demonstrate a need to strengthen policy implementation inputs and processes at the national and subnational level in South Africa. The ten key factors described in this study, some of which have already been identified in the literature, serve to confirm the importance of focusing on implementation planning during the policy development process.^{7, 11, 12, 14-18} While implementation assessments have been conducted on an array of health policy issues and in various geographic settings, few studies have focused on general implementation factors as they relate to the contexts and implications of decentralized health systems in low and middle-income countries.^{19, 20}

Reinforced in the health policy literature, strong alignment between policy development and implementation plans from the onset of the policy process can improve policy implementation and ultimately strengthen implementation impact.^{1, 3, 7, 11, 18-20} We recommend six strategies to NDoH and subnational governments in South Africa to strengthen policy implementation: maximize integration of health policies across programs; model implementation timelines and resources during policy development; strengthen consultations with subnational governments and frontline implementers during all stages of the policy process; develop standardized processes that improve access to policy documents; strengthen training systems for policies; and establish feedback loops to address implementation barriers as they arise. Though these strategies are specific to the decentralized context and implementation barriers in South Africa, they can be generalized to improve implementation processes in other low and middle-income countries with decentralized governments.

First, maximizing integration of health policies across programs at the national and subnational level can reduce the burden of siloed information for frontline implementers, improve consistency between policy guidance, and optimize resources available for implementation. By integrating policies, frontline implementers and policy champions will be able to more effectively manage and monitor implementation processes, increasing the quality of service delivery. An example of national policy integration is the 2010 Integrated School Health Policy.

Second, modeling implementation timelines and resources during policy development can strengthen coordination across decentralized health system and allow policymakers at NDoH and subnational governments to identify potential barriers to successful implementation.

Implementation modeling should identify the operational steps, timelines, and roles required to implement the policy and delegate a policy champion at each decentralized level for

implementation support. Implementation modeling should further estimate the resource inputs needed to achieve the policy outcomes. To forecast necessary inputs, national and subnational policymakers should estimate the financial and material resources, human resource capacity and skill, training needs, and monitoring and evaluation requirements needed to achieve implementation targets. Annual performance planning should be considered when determining timelines and available resources. By proactively envisioning implementation, policymakers and implementers can develop strategies to mitigate risks to successful implementation.

Third, it is important for policymakers at NDoH to consult with subnational governments and frontline implementers during the entire policy process. Targeted consultations with frontline implementers during policy development will allow NDoH to clarify the interpretation of the policy with policy users, prior to the final adoption of the policy. Frontline implementers will be able to identify components of the policy that may be unclear and identify potential implementation concerns that otherwise may not have been considered. Engaging subnational governments and frontline implementers during policy development and throughout implementation can also improve buy-in and support of the policy rationale.

Fourth, NDoH and subnational governments should develop standardized processes that improve access to policy documents. Frontline implementers need to have a direct path for accessing current, up-to-date policies. Standardized processes may include clear dissemination channels, clearly assigning responsibility for printing hard copies, and creating a user-friendly, electronic policy portal. Making policies and associated documents and tools more readily accessible for lower-subnational staff and frontline implementers is important for proper implementation and timely access to information.

Fifth, NDoH, subnational governments, and policy champions should engage in strengthening training models for policies. Insufficient understanding of policy details commonly results from poorly trained frontline implementers. Strengthening the TOT model and validating understanding of policy for all implementers is essential for proper policy implementation.

Online learning platforms may present an alternative approach to train large numbers of frontline implementers about new policy directives. Online learning would help reduce variability in how information is disseminated and could also validate implementer understanding through online testing features. Developing and effectively disseminating workstation aids that translate policies into simplified material will also strengthen policy understanding.

Sixth, establishing strong monitoring systems and feedback loops to address implementation barriers as they arise will give NDoH and subnational governments an opportunity to respond to implementation needs. Responsive monitoring systems and feedback loops will serve to provide additional support to subnational governments and frontline implementers. With improved monitoring, actions can be made to enhance implementation effectiveness and avoid unintended, negative consequences that may result from poor implementation.

Together, these strategies can improve the implementation of the Universal Test and Treat policy. An opportunity remains to clarify policy details for UTT, to strengthen implementation training, to disseminate copies of the policy and workstation aids, and to align planning for scaling-up differentiated models of care for stable adults. Stakeholders at the national and subnational levels should engage with frontline implementers to develop strategies that promote patient readiness and adherence for same-day initiation. National and provincial governments should continue to model and monitor required resources needed to successfully reach the UNAIDS 90-90-90 targets, including timely access to authorized prescribers who can initiate

treatment.

Conclusion

Attainment of national strategic priorities and delivery of quality health services in South Africa are dependent upon effective implementation of national and subnational health policies. To incorporate an implementation focus at every stage of the policy process, policy actors at the national and subnational levels need to direct attention to and collaborate across the decentralized policy context. Strengthening elements of effective policy implementation demands commitment and motivation at all levels- from national leaders to frontline implementers. The ten factors presented in this manuscript could act a framework for systematically strengthening policy implementation in South Africa and other low and middle income countries.

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