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Evaluating the Impact of the National Adolescent Health Strategic Plan on Adolescent Sexual Reproductive Health Services in Zambia: A Qualitative Study

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Abstract

Introduction: In 2011, the government of Zambia implemented the National Adolescent Health Strategic Plan 2011-2015 which aimed at addressing adolescent health problems in a comprehensive and consistent manner. Thus far, no formal evaluation has been conducted and it remains unclear whether interventions which were implemented had led to improved access to the services by adolescents. Using the WHO six building blocks framework for health system strengthening, the study sought to qualitatively evaluate the achievements of the 5-year strategic plan and draw generalizable knowledge for best practices for improving adolescent reproductive health in Low Middle Income Country (LMIC) settings.

Methods: To provide insight into the implementation of the strategic plan in relation to the six building blocks a qualitative case study approach was adopted for this evaluation. Twenty one Key Informant Interviews (KIIs) were conducted with key stakeholders involved in the implementation process at different levels in the health system in Zambia. Thematic analysis using the WHO building blocks framework was used to analyze data. NVivo 11 was used to aid coding, management and analysis.

Results: Close linkages across the six building blocks of the health system were observed. Observed weaknesses in one building block affected other health system building blocks negatively. Nonetheless, some successes were also reported including consistence and standardised packages for Adolescent Sexual Reproductive Health Services (ASRH), health worker training in ASRH, use of data for decision making, and better policy harmonisation. The major barriers to the implementation were inadequate infrastructure, funding and human resources.

Conclusion: The major barriers to implementation included inadequate human resources and funding which negatively affected service delivery. However positive trends were noted in health worker training and policy environment.

Keywords: Adolescent Sexual Reproductive Health; Strategic Plan; Health System

Abbreviations: ADH: Adolescent Health; ASRH: Adolescent Sexual Reproductive Health; ADFHS: Adolescent Friendly Health Services; HIA: Health Information Aggregation;

HMIS: Health Management Information System; HIV: Human Immunodeficiency Virus; LMIC: Low and/or Middle Income Countries; MoH: Ministry of Health; MGD: Millennium Goals Development Initiative; NGO: Non-Governmental Organization; NHC: Neighbourhood Health Committee; NHSP: National Health Strategic Plan; NHRA: National Health Research Authority; STI: Sexually Transmitted Infection; TWG: Technical Working Group; UNZABREC: University of Zambia Biomedical Research Ethics Committee; WHO: World Health organization

Introduction

According to the World Health Organization (WHO), adolescence is the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 19 [1]. It represents one of the critical transitions in the life span and is characterized by a tremendous pace in growth and change that is second only to that of infancy [2]. It also is a time when youths are discovering how to navigate new, often compelling, social challenges and are adjusting to myriad physical, cognitive and emotional changes within themselves [3]. The exploratory nature of this phase makes adolescents prone to early unwanted pregnancies, septic abortions, sexual abuse, HIV, alcohol and substance use and abuse and vulnerability to risks associated with early sexual activity and child marriage, and limited access to family planning services [2]. Despite their vulnerability they remain excluded from, and are under-served through the current health service delivery system [4]. This could be attributed to facilities being inadequately staffed or staffs who are unable to effectively provide the service due to lack of training [4].

In 2009, a country-wide situation analysis was carried out which revealed that adolescents have special requirements for health services, which need to be addressed with appropriate approaches that encourage and promote access to such services [5]. The type of health services and support that the adolescents need are those which effectively address their various barriers to accessing health services [6]. In the case of Zambia, the main barriers such as physical barriers which include inadequate and inequitable distribution of health facilities; long distances to the nearest health facility; shortages and inequitable distribution of health workers; lack of appropriate facilities and services for adolescents; perceived lack of efficiency and effectiveness of the

services; poor conditions of transport and communication infrastructure. Another barrier identified was psychological which includes the inner fear and lack of confidence to open up and freely discuss health problems with parents, peers and health personnel; and misdirected health seeking behaviors, leading to prioritization of non- conventional medical options such as traditional medicine [7].

These findings led to the development of the National Adolescent Health Strategic Plan which aimed to provide a unified way forward in addressing the gaps in the delivery of health services to adolescents as identified through the 2009 situation analysis.

Despite it being evident that adolescents require services that address their special needs, it has been observed that, currently there are limited number of public health facilities offering specific healthcare packages targeting the adolescents and their special needs [8]. That being said, adolescents continue to face poor health outcomes as a result of low uptake of ASRH services. Despite numerous interventions implemented to support and strengthen ASRH service delivery and uptake, evaluation of these past interventions remains under reported, making it difficult to inform future programming of ASRH interventions.

Although the Strategic Plan ended in the year 2015, there is optimism that the objectives and goals of the Plan have been fully realized. While there have been positive steps towards the successful scale up of youth-friendly services interventions aimed at improving reproductive health service provision for young people such as the development of the adolescent health strategy, interventions are often short term and have low coverage due to the dependency of donor funding for these programs [5]. There is limited or inconclusive information on the effectiveness of adolescent health interventions that have been carried out over the past years hence making it difficult to

ascertain whether interventions or programs have improved utilization and access to the services by adolescents. As a result this raises the question on the effectiveness of such interventions. In order to have a significant, long-term impact, these initiatives must be implemented over a sustained period and on a large scale.

In this paper we applied the systems thinking approach to provide insight to the linkages that existed between building blocks during the implementation of the Strategic Plan and how these linkages related to the perceived achievements of the implemented strategies.

Methods

Study design

A case study design which used key informant interviews (KIIs) with stakeholders in the implementation process of the strategic plan was adopted. This design was adopted to assess stakeholder's perceptions on the achievement of the National Adolescent Health Strategic Plan in relation to ASRH services delivery and to document barriers and facilitators of the implementation of the Plan. One patient died at the beginning of TAVI procedure due to low-output heart failure and electro-mechanic dissociation before passing the aortic valve with guide-wire and was excluded from analysis. Thus, 51 patients left to be retrospectively analysed for hemodynamic outcomes at the day of procedure and before discharge.

Target groups

The target groups for the key informant interviews are illustrated in **Table 1**.

Table 1 Target group population by respondent type.

Target Group	Type of respondent
Ministry of health head quarters	Adolescent health focal point persons/officers
Cooperating partners	United Nations Agencies i.e. UNICEF and UNDP
Provincial and district Level	Provincial and District Adolescent Health Coordinators
Facility level	The In-charges in the study health facilities and ASRH service providers

Sampling procedure and sample size

Twenty one KIIs were conducted in Lusaka, Central and Copper belt provinces. Participants were purposefully selected from the study areas based on whether they were involved or were aware of the implementation of ASRH programs at national, provincial and district level as part of the strategic plan. At facility level, participants selected were health facility In-charges or ASRH service providers at provincial and district level, sexual and reproductive health coordinators were selected, at national level, program officers of ASRH services were selected and at MoH, participants were drawn from sexual and reproductive health directorate. It was required that all the participants had knowledge of the strategic plan. Interviews

were conducted by the author and were held within the workplaces of the various key informants.

Data collection

Structured interview guides which addressed the WHO Health system building blocks: Service delivery, Workforce, Infrastructure, Health Information Systems, Financing, Leadership and Governance were administered to the different key informants at different levels. Within each of these, we explored some of the perceived achievements resulting from the implementation of the Strategic Plan and also whether there were any barriers or facilitators to the implementation process. The interviews were recorded with digital tape recorders. In

addition, non-verbal cues from participants were recorded through note taking (Figure 1).

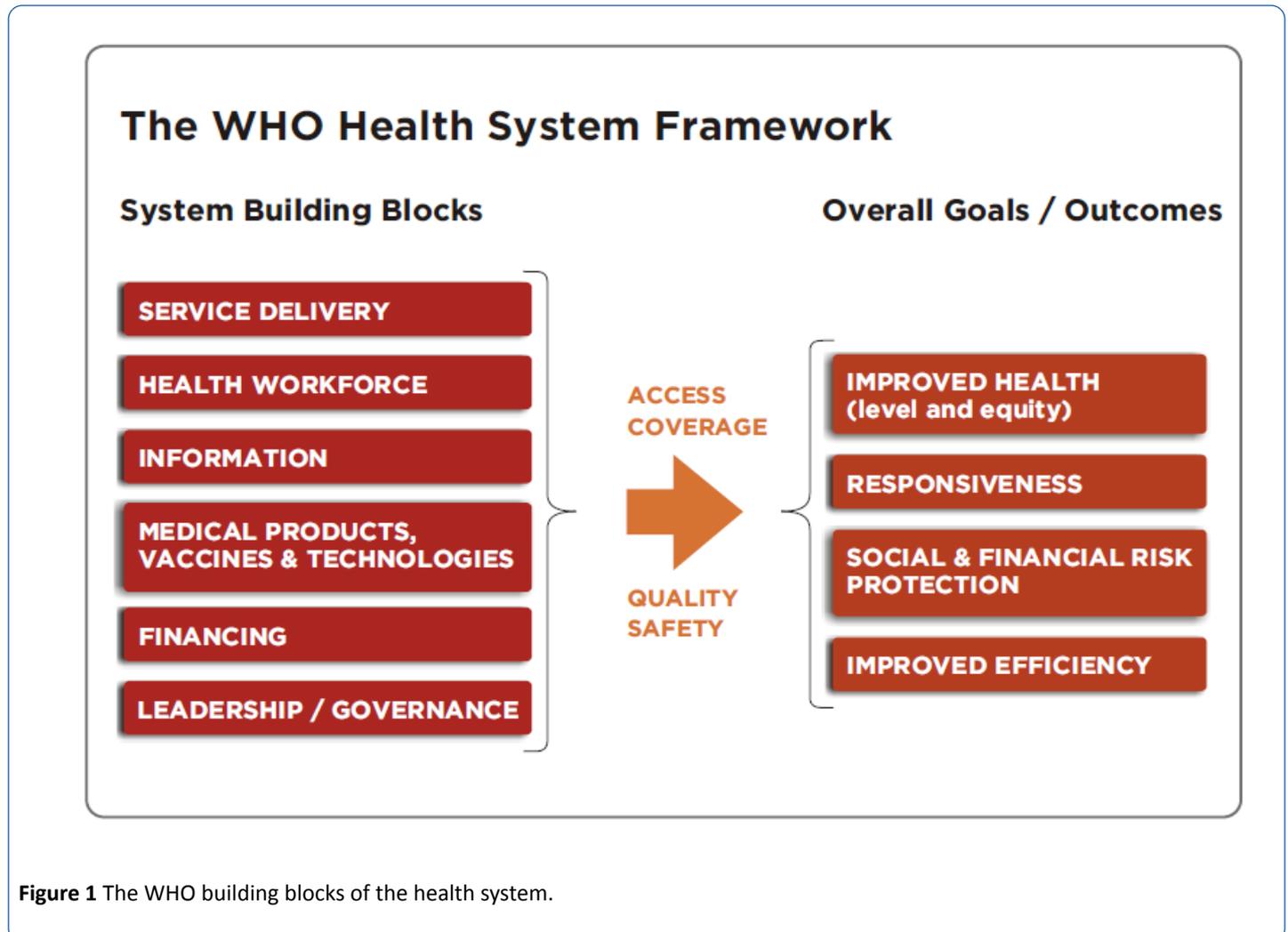


Figure 1 The WHO building blocks of the health system.

Data processing and analysis

The interviews were recorded, transcribed and coded by the researcher/author. The transcripts were cleaned and exported to NVivo 11 which was used to aid with code generation and data management. Using the deductive method, data was organised using pre-determined themes based on health systems building blocks which formed the basis for the identification of broader subthemes. Transcripts were reviewed with the aim of validating the pre-determined themes, identifying additional themes and sub-themes. The analysis illustrated the linkages between the building blocks and how they have contributed to service provision.

Ethical consideration

The study was approved by the University of Zambia Biomedical Research Ethics Committee (UNZABREC) and the National Health Research Authority (NRHA). All participants were provided with an information sheet which informed them about the purpose of the research, their rights as potential participants, and what they would expect with regards to the interviews and confidentiality. An informed consent was

obtained from all participants before each interview, and all consenting persons were asked to sign consent forms.

Results

The results are arranged in the following order: Service delivery, Health workforce, Health Infrastructure, Health Information, Health financing, Governance/Leadership.

Health service delivery building block

Improved quality of service delivery: One of the main strategies of the plan to improve the quality of service deliver was to ensure that service delivery was standardised. One of the notable successes of the implementation was the development and subsequent roll out of the national standards and guidelines for adolescent health friendly services. It was reported that the quality of the services being provided had greatly improved. These guidelines provided standard procedures of providing services to adolescents with an aim to increase acceptability and utilization of services. These standards aimed at providing comprehensive quality services and coordinated response to adolescents and young people's needs. Through training the

service providers using these guidelines, they were able to differentiate the needs of adolescents from other groups and hence tailor the services to the needs of the adolescents. The quality of counselling services for both family planning and HIV counselling and testing were areas that had seen a remarkable improvement this was cited as being as a result of more providers being trained in the national guidelines. One district officer narrated that: "With more providers being trained on how to deliver these services and how to deal with this special group this has greatly improved the quality of the services being provided in the district". (District Health Worker, Kabwe)

Focused service delivery: It was reported that the implementation of the strategic plan resulted in more focused and targeted service delivery. Services were tailored around the unique health needs of the adolescents. These needs include the assured privacy and confidentiality, easy access of facilities, convenience, age appropriateness and cost effectiveness. Services were seen to be more responsive to their needs as opposed to them being simply adolescent friendly as was reported by a cooperating partner: "The implementation of the plan gave rise to the need to move away from adolescent friendly services adolescent responsive services responsive in the sense that every provider should know that when I have a five year old these are the things I need to think about, when I have a 15year old these are the things I need to think about and when I have an 85 year old these are the things I need to think about, so it's a responsive service looking at the specific needs of a client and the special needs". (Cooperating Partner, Lusaka).

Health workforce (Human resources)

Improved capacity of service providers: One of the known barriers to accessing ASRH services was the negative attitudes of the providers towards adolescents seeking services, hence limiting access and utilization to these services (11). A major gap that existed was that service providers were not able to distinguish services for the general public and adolescents [7]. As a result of the implementation of the strategic plan in Zambia, health care workers were trained in the national Standards and guidelines for adolescent health friendly services. The training package was targeted at district level planners/coordinators, health facility staff and peer educators. With the training more staff were reported to be competent in providing adolescent friendly services. This was said to have positively impacted service uptake by adolescents. It was reported that in facilities where providers had been trained, more adolescents were accessing services compared to in facilities where there was no trained providers. As narrated by a MoH member of staff: "When we train people they will be able to implement so we take it that at the facilities where people have been trained there's a difference in the way services are being provided compared to the facilities where people have not been trained (MoH Officer, Lusaka)".

Improved attitudes of service providers: Staff attitudes towards adolescents seeking services has been documented as a key barrier to access to services by adolescents. As a result of the capacity building strategies through the implementation of the strategic plan. Stakeholders cited that this barrier had been

addressed and the findings indicate a positive change in attitudes towards adolescents among health workers as illustrated by one key informant as follows: "Providers are now more receptive to adolescents and they know how to deliver the package of services to the young people not like in the past STI services and other things they used to come but of course when they come to these health workers they used to shout at them so you find that most of the times they go back with the same challenges" (District health worker, Ndola).

Health Infrastructure building block

Inadequate space/infrastructure: Inadequate or limited health infrastructure is a barrier that limits access to ASRH services in several LMICs. Interventions such as the strategic plan were designed to address this barrier. Infrastructure or space to carry out ASRH services is a key determinant in the success of any ASRH program [9-11]. Stakeholders revealed that despite providers being willing to provide services to adolescents, the facilities were not well equipped in terms of space to provide these services. Spaces which ensure confidentiality for the adolescents. This was confirmed from the following respondent who said that: "We would like to have at least an independent space even within the clinic boundaries where we just deal with adolescents. There's a clinical officer there or a nurse there to attended to their needs alone because there are still some adolescents that can't reach us because of the fear of being seen by adults who maybe relatives or friends to their parents" (Health facility In-charge, Ndola).

Competing needs for space in facilities: Inadequate space in facilities and low prioritization of adolescent health service delivery, led to facilities re-allocating space previously allocated to ASRH services to other areas of service delivery. In most cases it was common that these spaces were taken up by services like Maternal, neonatal and child health services. The following verbal quote supported the above findings: "We have a youth friendly space but you find that they are competing, you find that there are times when if that space is being used for other services we may allow the adolescents are made to come at another time in most cases they do not come back" (Health Facility In-charge, Kitwe).

Health information building block

Updated HMIS indicators: Health Information is critical for programming and decision making [12]. In order to adequately and effectively plan for ASRH activities there is a need for adolescent specific disaggregated data to be available. Stakeholders cited that facilities are now able to capture age disaggregated data on adolescent health services which is reported in to the HMIS through the HIA2 (Health information Aggregation Form). However, one stakeholder noted that age disaggregation of data was only concentrated around certain service delivery areas such as maternal health as narrated: "HIA2 tool has been streamlined but has created some significant disaggregation. I think there's a bias to the disaggregation to HIV, so if you look at that you will see that for HIV testing services, they are asking facilities to go through

those HTC ledgers and collect data not 15 and above and 15 under” (Cooperating partner, Lusaka).

Focused data collection: In the view that the HIA2 only currently captures maternal health and HIV specific data with very broad age bands, a few facilities developed a more detailed tool which had finer age disaggregates and captured more services. This tool is mainly being used in the facilities which were under the MGD I grant as narrated: “We designed a tool specifically for adolescents, this the tool that we are using so that at least we can know, we can have a picture of the adolescents who are getting the services” (District health worker, Lusaka).

Health financing building block

Inadequate financing: Health financing is an essential building block for health system strengthening, its goal is to ensure adequate spending on health and effective allocation of financial resources to different types of public and personal health services [12]. Inadequate financing was cited as a key barrier to the implementation of the strategic plan which grossly affected the implementation of the activities. The Ministry of health did not have adequate resources to fund most of the activities as a result this lead to the late implementation of the plan. The following verbal quote supported the above findings: “I think there was late dissemination of the document due to lack of resources, the plan had not been disseminated to certain so you find that it wasn’t widely known. I think the procedures took long from development to finalization and dissemination and the roll out was in 2015 in which the strategic plan was coming to an end”. (MoH Officer, Lusaka).

It was further noted that to some extent the strategies in the plan were somewhat ambitious. This is in the sense that some key strategies were beyond the mandate of the mother ministry. Thus making implementation close to impossible for certain strategies like infrastructure development. To justify this statement, a MoH officer was quoted saying: “In relation to infrastructure development we did not do too good and I think that is one difference which is there between the current Adolescent health strategy and the strategic plan and we realized that, that was something which was beyond our powers and means because infrastructure falls under a different ministry all together”.

Donor dependency: While some donors committed funds to the implementation of the strategic plan it was difficult to assess their individual contribution and also to coordinate activities. There was not a clear plan on how the implementation would be funded and hence key activities were supported by funds from cooperating partners. The following verbal quote supported the above findings: “One of the challenges with implementing that past strategic plan was that it was not well articulated in the how strategic plan would be funded and if you were to go back and review the yellow book and see what was the actual ministry of health contribution to implementing that very ambitious strategic plan, you see that there were very limited resources available so it was completely dependent on the availability of cooperating partners’ resources hence the work

planning was driven by the resources as opposed to the plan” (Co-operating Partner, Lusaka).

Health governance and leadership building block

Operationalized ADH technical working groups: Leadership and governance is an essential building block in the health system which helps attain highest levels of transparency and accountability at all levels of implementation of the ADH program [12]. Prior to the implementation of the strategic plan stakeholders reported existing leadership and governance arrangements for adolescent health in Zambia needed further strengthening [5]. It was reported that through the operationalisation of the strategic plan coordination structures had been established and strengthened. Adolescent Health (ADH) Technical working groups were reported to be fully functional and comprise of stakeholders involved in adolescent’s welfare. These technical working groups ensure that all activities are carried out in a coordinated manner within the province or district. This was narrated by a provincial coordinator as follows: “All districts have Adolescent Technical working groups who are in charge of coordination all activities in the districts and have keen interest in adolescents like ministry of education, culture and arts, fisheries and livestock and NGOs” (Provincial health officer, Central).

Coordination with community structures: It was reported that at facility level service providers have been working with community structures such as neighbourhood health committees to coordinate activities with adolescents in the community away from the facilities. This was noted from the comments made by some health facility staff who said: “The participation of peers who are part of the NHC (Neighbourhood Health Committee) they are really doing a good job because they are working to sensitise the youth in the community. As a facility we train them as peer educators so they’ve been empowered with information so they are going into schools and markets to share through drama so there’s positive impact on the adolescents”. (Health Facility In-charge, Chilanga).

Unclear policy on age of consent: Key stakeholders cited that it was unclear how the legal age of consent can be applied in provision of ASRH services. This has negatively affected the uptake and roll out of services because adolescents under the age of 16 who were in need of services such as family Planning and HIV testing would be required to seek parental consent. These findings were supported by the comments from a service provider as follows: “Young people most of the time under the age of 15 would come to our facilities wanting to access family planning particular depo, as a provider I usually asked them to go and return with their parents or guardians knowing very well that the child will not return. The same also happens when they want to be tested for HIV. We ask for parental consent”. (Health Facility In-charge, Kabwe).

Discussion

The study showed close linkage across health system building blocks, illustrating the interdependence between building blocks. The major drivers of implementation failure where

financing and human resource challenges with ramification across other building blocks especially service delivery for adolescents. These findings are consistent with other studies which showed that challenges noted in service delivery were linked to human resources, medical supplies, information flow, governance and finance building blocks either directly or indirectly [10]. Our results further justify the need for systems wide approaches in assessing performance of health system interventions [13]. Despite these challenges, positive trends were also reported as achievements during the 5 year implementation of the adolescent health strategic plan.

Of note were improved training and capacity of service providers and enhanced coordination of ASRH activities at various levels. The government commitment to addressing adolescent sexual reproductive health challenges was said to emanate from the implementation of the strategic plan.

The capacity building activities which included training and adolescent sexual reproductive health service delivery orientation helped change the attitudes of providers towards adolescents seeking services making them more receptive to the adolescents and their needs. Literature has shown that staff with more education and those who had received continuing education on adolescent sexuality and reproduction showed a tendency towards more youth-friendly attitudes [14]. The study found that prior to the implementation of the Strategic Plan and the training/orientation of service providers, some providers did not know how to provide tailor made services resulting in adolescents shunning the services being provided. This is consistent with other studies which found that majority of facility staff who had not been trained, faced difficulties in certain aspects such as initiating discussions between adolescents [15].

Another positive outcome of the strategic plan was improved quality of service delivery for young people by trained health workers. The content was the material used and better retention rate among young people seeking ASRH services. Literature has shown that shortage of trained staff has been seen as one of the major barriers to the provision of ASRH services [11]. According to the findings of this study stakeholders reported that with more staff being trained the quality of the services being provided has greatly improved. These findings are consistent with other studies [16] which revealed that inadequate supply of trained staff to meet the growing demand for services and inefficient health system operations was a major barrier to delivering ASRH in the United States of America. The current study also revealed that the focus on ASRH services being friendly (accessible, acceptable, equitable, appropriate and effective) presented a gap in service delivery and hence had a potential of affecting service utilization. Therefore the emphasis should be placed on making services more responsive to the needs to these adolescents. This is in line with literature [17] which asserts that to achieve universal health coverage governments need to tailor health systems to respond to the needs of adolescents. These findings are in line with the focus of the ADH strategy 2017-2021 which aims to strengthen delivery of responsive health services in a bid to increase access and utilization of services [18].

Limited or inadequate infrastructure to house the provision of services was reported to be a barrier to accessing ASRH. Studies have shown that more space in the facility is essential to ensure privacy and confidentiality and to reduce congestion [14]. One of the key strategies of the strategic plan was to address this barrier so as to increase utilization of ASRH services. Findings from the study revealed that infrastructure development under the implementation of the Plan was not well addressed due to inadequate funding to support such activities. Our results revealed that this might have greatly influenced utilization and knowledge trends among adolescents. Due to multifaceted and multi sectoral requirements for infrastructure development, it is now part of the National Health Strategic Plan (NHSP) and hence it will be addressed as part of comprehensive health sector response [18].

Lack of funds to support the implementation of activities under the strategic plan was seen by stakeholders as another barrier to implementation of the Plan. The study revealed that despite the huge government commitment to set adolescent health needs as a national priority through the development of the Plan, funds were not available to comprehensively implement activities. This in-turn led to the delayed roll-out of the Plan and hence significantly affecting implementation and as a whole. These findings were consistent with other studies [19]. The current study revealed that due to the inadequate funding from the government most activities that were implemented were supported through donor funding and this made the most programs unsustainable beyond donor funding. These findings are consistent with findings from another study that found that the provision of adolescent sexual reproductive health services has been inconsistent in Zambia due to funding challenges therefore this has led to the design of interventions being done in a project like manner [20].

Our results show that during the implementation of the strategic Plan, strides had been made to address the gaps in the health information systems. Although improvement in data on adolescent sexual reproductive health was reported, this mainly related to some level of disaggregation of adolescent health data with a focus on maternal health indicators and HIV leaving out other crucial indicators for adolescent health. Stakeholders reported that such lack of comprehensive data made it difficult to plan and assess the effectiveness of their interventions. These findings are consistent with a study which revealed that a lack of accurate, up-to-date, age-disaggregated data on sexual and reproductive health and HIV/AIDS hinders well-informed policy and strategy development [21].

Another positive finding was improved ADH service coordination at all levels. This was achieved through setting up of Adolescent Health Technical Working Groups (ADH-TWG) at all levels of health care delivery involving multiple stakeholders. The work of these TWGs was to coordinate and mobilize resources to support ADH in their respective constituencies. Literature has further shown that coordination of ADH has been seen as a key ingredient in successful implementation of ASRH services [22].

The limitations of our study include us not taking into account the beneficiaries perspectives on service delivery during the

implementation period of the Plan hence, reported increase in service uptake and utilization cannot be directly attributed to the implementation of the Plan. Another limitation was that in using purposive sampling which is a subjective methodology to collecting data from health workers and other stakeholders and it was possible that respondents could have been tempted to give positive responses, thus, biasing results. The study was conducted in an urban setting with a small sample of respondents drawn from five districts in Zambia. The findings of the study may not be representative of other settings. Therefore, similar studies are necessary in other settings for comparability of research findings.

Conclusion

In summary, the study revealed both successes and challenges in implementing the 5-year strategic plan for adolescent reproductive health in Zambia. The major barrier to implementation included inadequate human resources and lack of funding which negatively affected service delivery. However positive trends were noted in health worker training and policy environment. The study further illustrated that building block specific weaknesses or successes had cross cutting effects on other health system building blocks. Challenges that were noted under financing were linked to infrastructure, service delivery and health workforce directly or indirectly. There was close linkage between health financing and other health system building blocks. In order to achieve universal access to adolescent health services a total systems approach needs to be put into place. There is also a need for the Ministry of Health to change how the health system responds to the health needs of adolescents.

Declarations

Ethical issues

Independent ethical review approval was sought from multiple institutional review boards (IRBs), including the University of Zambia Biomedical Research Ethics Committee (IRB No 00001131 of IORG0000774) and National Health Research Authority of Zambia to ensure that the study was compliant to the code of ethics according to both international standards and Zambia's National Health Research Act. Administrative clearance was also obtained from The Ministry of Health and Provincial and District Health Offices in the study areas. Written informed consent was obtained from all research participants. To protect the identity of respondents, all identifying information was excluded from the interview transcripts.

Consent for publication

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request

Author's contributions

All three authors contributed towards the study design. Mercy Zimba-Chisashi carried out the data collection. All authors analysed the data. Mercy Zimba-Chisashi drafted the manuscript and all authors contributed towards revision of the manuscript. All authors read and approved the final manuscript.

Competing interest

The authors declare that they have no competing interests.

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