Increasing Access to Youth Sexual & Reproductive Health Services in Tanzania: Recommendations to Higher Learning Institutions

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Executive Summary

Adolescent sexual and reproductive health is a public health priority. Alongside benefiting youth directly, increased investment in these services contributes to broader development goals. In Tanzania, many youth lack access to adequate sexual and reproductive health information and services. Many higher learning institutions in the country lack awareness and resources to invest in and facilitate youth friendly health services. As a result, there are high rates of unplanned pregnancies, abortions, and complications—including deaths—arising from unsafe abortion among female students. Prioritizing the health and enhancing the health education of higher learning institution students will work to better equip Tanzania's next generation of leaders to plan their educations, families, and futures. This paper examines evidence and incorporates stakeholder consultations to recommend ways in which HLIs could incorporate into their schools' efforts in order to bolster the availability and accessibility of SRH youth-friendly services.

Background

The Advance Family Planning (AFP) initiative, an international family planning advocacy initiative within the Johns Hopkins Bloomberg School of Public Health (JHSPH) Department of Population and Reproductive Health, leverages in-country, evidence-based advocacy efforts in nine countries to ensure high-quality, voluntary family planning.

In Tanzania, AFP is working to increase access to contraceptive services by addressing youth sexual and reproductive health (SRH) needs. As one of its efforts, AFP is partnering with the United Nations Association (UNA) of Tanzania to assist 15 higher learning institutions (HLIs), including universities, colleges, and vocational training institutions, in the Mwanza and

Shinyanga regions to integrate youth-friendly family planning and reproductive health services for their students.

In 2014, UNA Tanzania conducted a baseline survey of youth-friendly health services available in higher learning institutions in Mwanza and Shinyanga, two regions that suffer from significantly lower contraceptive prevalence rates compared to the national average. Although the schools reported a lack of youth health services among their chief concerns, of the institutions surveyed none reported having youth friendly health services at their facilities. Only one institution had ongoing efforts to expand its services. The institutions also reported high rates of unplanned pregnancies, abortions, and complications—including deaths—arising from unsafe abortion among female students.

The surveyed HLIs are largely supportive of efforts to expand efforts to SRH services for their student populations. In fact, HLIs in Shinyanga have entered into a memorandum of understanding (MoU) with one other and with Korandoto College of Health Sciences, which has a network of faculty and student health providers trained in family planning, in order to provide SRH information to other students attending HLIs in the region. This network will help to facilitate both SRH education of students and inter-school sharing of expertise and approaches to better cater services to students. Additionally, HLIs in Mwanza initiated a partnership with local service provider organizations, such as UMATI, Marie Stopes Tanzania, EngenderHealth, and Population Services International, in order to bring SRH services to campuses.

The majority of HLIs lack resources and awareness about ways that their institutions could provide and facilitate greater access to youth-friendly SRH information and services. This paper examines evidence and incorporates stakeholder consultations to recommend ways in which

HLIs could incorporate into their schools' efforts in order to bolster the availability and accessibility of SRH youth-friendly services. These recommendations will be shared with HLI administrators and will be used by AFP and UNA Tanzania staff to advocate ways in which HLIs can increase family planning services for their students.

Methodology

This capstone effort reviews the Tanzanian SRH policy landscape and the research on effective interventions that could be employed by HLIs to better serve the SRH needs of their student populations. The aim is to provide HLI administrators, policymakers, service providers and advocates with evidence-based recommendations to improve access to contraceptive and reproductive information and services for Tanzanian youth.

After an initial literature review and consultations with JHSPH faculty, it became clear that the evidence base for effectiveness of youth-friendly service initiatives, and particularly for post-secondary school populations in sub-Saharan Africa, remains largely spotty and insufficient.[1] The evidence that does exist is quite mixed as to whether and which components of school-based interventions result in changes in SRH behaviors and outcomes.[2,3] An initial review of the Tanzanian SRH policies relating to youth SRH was undertaken in anticipation of a visit to Tanzania in January 2015 to conduct primary stakeholder consultations to better understand the realities on the ground.

In January 2015, consultations were conducted with HLI administrators and students, alongside local service providers and non-governmental organizations (NGOs) providing SRH-related services in the Mwanza and Shinyanga regions of Tanzania. Additionally, consultations were conducted with national stakeholders in Dar es Salaam. These consultations provided greater

insight and understanding of the local context, and related opportunities and challenges. Halima Shariff, AFP's Tanzania Country Director, and United Nations Association Tanzania staff guided selection of stakeholders to be interviewed.

In Dar es Salaam, I met with staff of the United Nations Association, Health Promotion Tanzania (HDT), Johns Hopkins University Center for Communication Programs Tanzania, and Marie Stopes Tanzania to better understand national-level SRH efforts and policies. In Mwanza I met with administrators of three HLIs, including the Institute of Rural Development and Planning, St. Augustine University of Tanzania, and the Fisheries Education and Training Agency. I also met with UNA staff based in Mwanza and with UMATI, an International Planned Parenthood Federation affiliate providing clinical SRH services and information to youth, in order to gain additional perspective about SRH resources available in the district.

In Shinyanga, I met with administrators at four HLIs, including Kolondato College, Vocational Training College (VETA), MUSOMA Utalii, and Moshi University College of Co-operative and Business Studies (MUCCoBS). To gain a perspective of local non-governmental organizations operating in Shinyanga, I met with the Agape AIDS Control Programme and JOICFP, a Japanese organization that focuses on SRH programs. To gain perspective of local governmental health services, I consulted with the Regional Medical Director of Shinyanga, Dr. Ntuli Kapologwe. Finally, I met with around thirty MUCCoBS students and attended the launch of the university's SRH club in order to gain student perspective on these issues.

The research review and the consultations found a lack of youth SRH policies and resources tailored to HLIs. In consultations with advisors and with Tanzanian advocates, it was determined that it would be useful to develop a brief that included a checklist of recommendations that HLIs

might employ to better facilitate increased access to SRH information and services for their students.

Tanzanian Sexual & Reproductive Health Context

Investing in Tanzania's next generation is a smart investment for the country's future prosperity. Youth ages 10-25 make up one of the largest groups in the country, constituting 31% of Tanzania's population.[4] By investing in voluntary family planning, Tanzania can help to spur accelerated economic growth by decreasing mortality and fertility rates and fostering its working-age population. With both fewer dependents to support and greater social and economic investments in place, Tanzania could create a window of opportunity for rapid economic growth.[5] Young leaders attending HLIs constitute a unique youth cohort with particular potential for future national leadership. Prioritizing the health and enhancing the health education of these students will work to better equip Tanzania's next generation of leaders to plan their educations, families, and futures.

Globally, it is widely recognized that young people face particular challenges in accessing SRH healthcare services and have specific health needs because of their unique stage of biological, cognitive, and psychosocial transition into adulthood.[6] Unprotected intercourse is common among many adolescents. Young people constitute half of newly acquired HIV infections, with most of those affected living in developing countries.[7]

As is the case globally, Tanzanian youth are disproportionately affected by the risks associated with early and unprotected sex. Many young people become sexually active without planning their sexual relationship nor with full knowledge of potential health consequences. Moreover, in

many cases, early sexual experience experienced by adolescents in developing countries is unwanted and the result of coercion or pressure.[8] Youth are particularly vulnerable to high rates of unplanned pregnancy, HIV/AIDS infection, and other sexually transmitted infections (STIs).

Poverty and gender inequality amplify young women's vulnerability to poor SRH outcomes in particular, increasing their exposure to early marriage and childbearing, unintended pregnancies, and STIs in Tanzania. National and Demographic and Health Survey (DHS) data indicate that in 2012 almost half of all females aged 20-24 years old transitioned to sexual behavior before the age of 18. 23% of women aged 15-19 years old had begun childbearing.[9] Nearly 44% of women were either mothers or were pregnant with their first child by age 19. Almost all females aged 24 (91%) had ever been pregnant.[10] Tanzania's high adolescent birth rate is likely associated with the low use of modern contraceptives.

Although the majority of Tanzanian youth have had sex by the age of 18, very few are using contraceptives.[11] In 2010, the DHS showed that of currently married women, only 12% of 15-19 year olds and 23.9% of 20 to 24 year olds were using a modern method of family planning. Among sexually active, unmarried women, 34.5% of 15-19 year olds and 47.9% of 20-24 year olds were using any form of modern family planning.[12] And 22% of young women have unmet need for family planning.[13] Among women ages 15-24 years old, who reported sexual intercourse with more than one sexual partner in the past 12 months only 31.6% reported using a condom during last sexual intercourse.[14]

A high rate of unmet need for contraceptives often results in unintended pregnancies, which in turn results in higher abortion rates. Abortion is illegal in Tanzania and women who wish to

terminate their pregnancies generally must seek out unsafe abortion. In fact, unsafe abortion accounts for an estimated 16% of maternal deaths in Tanzania, contributing to its having one of the highest maternal mortality rates in the world.[15] The Ministry of Health reports that one-third of incomplete abortion cases that present to health facilities involve adolescents, and one in five girls involved are students. It is likely that illegal abortion is a significant cause of maternal death and morbidity among adolescent girls.[16]

Young people, and particularly young women, are among the most vulnerable to HIV infection. In 2012, HIV prevalence among the population ages 15-24 was 2.7 among females and 1.2 among males. Less than half of youth (43.4%) have comprehensive knowledge of HIV and its transmission.[17]

An unintended pregnancy can irrevocably disrupt a young person's life by interrupting schooling and training. Contracting HIV in an unprotected sexual encounter can reduce a person's prospects for a healthy and productive future.[18] Yet, unintended pregnancies, unsafe abortions, and sexually transmitted infections are all largely preventable with proper and consistent use of contraceptives and condoms.

Evidence strongly indicates that school-based programs can increase knowledge and improve attitudes related to delaying or decreasing risky sexual behaviors and increasing contraceptive use.[19,20] School-based programs have a particular advantage to reach a large number of youth and may, in fact, be the only place where youth can access information about SRH issues.

Tanzania Sexual & Reproductive Health Policy Context

Tanzania has a number of national policies that promote youth-friendly services. The country's policy guidelines include the Tanzania National Health Policy 2007; the Reproductive and Child Health Policy Guidelines; and the National Standards for Adolescent Friendly Health Services. Related strategic and planning tools include the National Adolescent Health Strategy 2011-2015 and the National Road Map Strategic Plan to Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania 2008-2010.

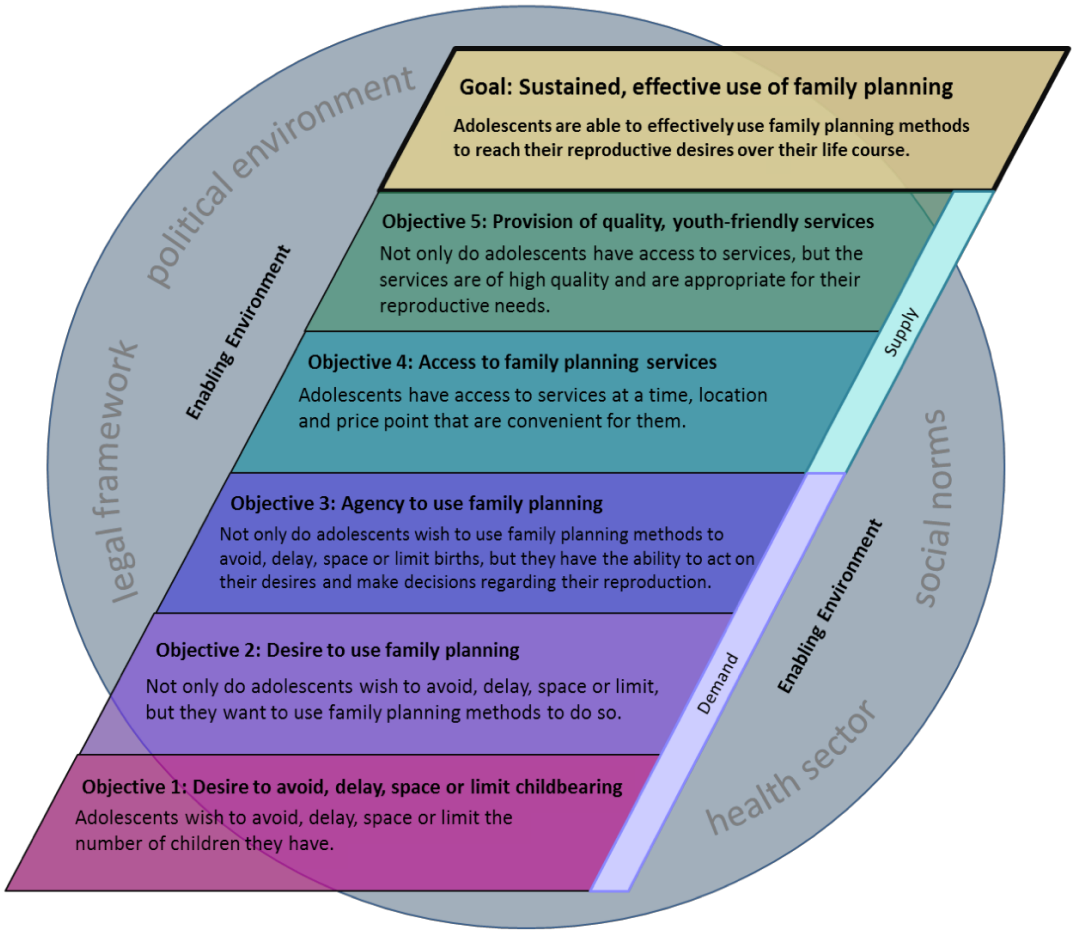
Additionally, there are a number of nationally-approved training and service delivery tools related to youth-friendly SRH information and services, including: the National Curriculum for Service Providers on Adolescent Reproductive Health: Facilitators' Guide; the National Curriculum for Service Providers on Adolescent Reproductive Health: Handout; the Curriculum and Manual for Paraprofessional Counselors; the Facilitator's Guide and Manual on Peer Education for Young People; the National Standards for Adolescent Friendly Reproductive Health Services; the National Standards on Peer Education for Young People; and the Training of Trainers Handout.

Overall, strong policies conducive to supporting youth SRH exist in Tanzania. However, these policies are often not implemented at sub-national or local levels, often because awareness and resources needed to actualize the policies are often lacking. Moreover, the youth-specific SRH in Tanzania remains challenged by cultural and social norms and stigma and discrimination relating to youth sexual and reproductive behaviors and services. Finally, there are very few, if any, standardized SRH-related policies or guidelines tailored to the HLI environment.

Context for the Provision of Youth-Friendly Services in HLI Settings

The International Center for Research on Women (ICRW) has developed a helpful conceptual framework based on evidence about the barriers that youth face in demanding, accessing, and using family planning and the programmatic approaches to mitigate these obstacles.[21] The framework postulates that there are five objectives to be met in order to fulfill adolescents' sustained, effective use of family planning.

ICRW Adolescents and Family Planning Conceptual Framework



The underlying tenant of ICRW's Objective 2 that youth not only desire to avoid, delay, limit or space their pregnancies and want to use family planning methods cannot be realized unless they

have basic understanding of reproduction and how contraceptive methods work. Objective 3 highlights that knowledge alone is insufficient to spur adolescents to use contraceptives; knowledge must be accompanied by skills, empowerment, and self-efficacy to enable youth to act on their decisions. Objectives 4 and 5 depict the need for services to be both accessible and high-quality, and youth-friendly. Moreover, the enabling environment, consisting of the legal framework, political environment, health sector, and social norms, also significantly influence the ability of youth to demand, access, and use family planning.

On the demand side, Tanzanian youth attending HLIs face challenges across these various objective levels. Although students may want to delay, space, or limit their pregnancies in order to focus on their education, they are unlikely to have a comprehensive understanding of reproduction or contraceptive methods. Moreover, according to my Tanzanian informants, most HLIs do not teach life skills nor do they facilitate programs that focus on fostering students' agency to seek out SRH services.

On the supply side, youth face additional barriers to access. Globally, youth often face challenges in accessing health services because of costs[22], lack of convenience[23], or lack of publicity and visibility of SRH services. Additionally, young people might not access available services because they lack knowledge of what services are available.

Moreover, lack of confidentiality is another major concern that can inhibit youth from seeking services.[24,25] Youth might be fearful or ashamed of presenting at a public health clinic, or concerned that providers will not maintain their confidentiality. Youth generally—with Tanzanian HLI students being no different—are particularly vulnerable to stigma from providers, who may be biased against youth and specifically against the provision of SRH services to

youth.[26] Providers might scold, ask difficult questions, or perform unpleasant procedures. Moreover, oftentimes providers are not trained to effectively communicate with young people about sensitive topics, such as SRH.

A "youth-friendly" environment is one that facilitates accessibility, acceptability, and effectiveness. With regards to accessibility, services should be in reach and useable by all young people who need them. Moreover, services should promote privacy and be respectful. Services should be appropriate and high-quality.[27]

Approaches to reach youth with youth-friendly SRH programs generally fall within a few categories. Tylee, et al. classifies different youth-friendly health services into six groups.[28] The first group is a center specializing in adolescent health set in a hospital setting. This type of center provides in-patient services in addition to drop-in services for young people.[29] Additionally, a center generally refers young patients to nearby health facilities. A second type of service is provided in a community-based facility, which focuses on health-service provision within a broader remit of health services for a general community. Such a center might be a stand-alone unit (generally run by non-governmental organizations or private institutions) or as part of a broader governmental or municipal system.[30]

A third type might be a community-based center that serves as a health facility as well as provides additional community services.[31] Fourth, pharmacies and shops, which sell health products such as post-coital contraception and condoms, serve as another type. A fifth type is through informal channels, such as reaching youth with information on street corners, shopping malls, or bars, or at their workplaces.[32]

Finally, school-based or college-based health services and centers linked with schools or

colleges can provide youth-friendly services. This model provides preventive and curative health services within or nearby the premises of schools.[33,34]

Many youth have their first sexual experience while attending school, making the school setting an even more important platform to provide SRH education.[35] Studies have shown that making family planning services more readily available to youth will reduce the rates of unintended pregnancies, unsafe abortions, and school dropouts.[36] HLIs are uniquely positioned to identify and minimize the barriers that prevent young people from accessing sexual and reproductive health (SRH) services.

Tanzania's National Family Planning Guidelines and Standards, 2013 states that "all family planning service-delivery points—whether in a facility, community, or outreach setting—should incorporate youth-friendly services" and that "all young people are able to obtain sexual and reproductive health information and advice relevant to their needs, circumstances, and stage of development. However, school-based youth friendly services, or facilitation thereof, are not clearly defined.

Recommendations

The available evidence on the effectiveness of adolescent SRH interventions in developing countries is limited, and where it does exist shows mixed efficacy. Only a small proportion of adolescent SRH interventions have been rigorously evaluated and there is little evidence about long-term behavioral effects or scalability of interventions. Generally, interventions—whether they be school-based, community-based, health-facility-based—tend to have a positive impact on adolescent sexual reproductive health-related knowledge and attitudes.[37]

A systematic review of evidence between 1990-2008 on the effectiveness of interventions in sub-Saharan Africa to reduce risky sexual behaviors and pregnancy, HIV and other STIs among youth found that there is insufficient evidence to recommend wide-scale implementation of the majority of the types of interventions that have been considered. Although multi-component interventions may be the most effective, there has been insufficient research to determine which components of multi-component interventions are most essential and cost-effective to achieve positive SRH outcomes in youth populations.[38]

Despite the meager evidence-base, recommendations for HLIs in Tanzania for this capstone project were developed based on identified evidence-based best practices that could be applied to this particular post-secondary student demographic and HLI setting context. These recommendations connect evidence-based interventions with the identified needs and gaps assessed through review of data related to the SRH needs of Tanzanian youth and primary consultations with HLIs in the Mwanza and Shinyanga regions. Advance Family Planning and United Nations Association Tanzania staff will advocate for these recommended actions to HLI administrators and stakeholders. Although unlikely that a HLI would adopt all of these recommendations, ideally an institution will adopt the most important and relevant to their student populations.

In order to facilitate increased access to SRH information and services, higher learning institutions are encouraged to institute these recommendations:

- ✓ **Provide On-Campus Youth-Friendly SRH Health Services:** Hire and train youth-friendly health staff that are approachable, respectful, non-judgmental and good communicators, to work at on-campus health centers or dispensaries. Ensure health staff has clear understanding of contraceptive services and STI and HIV testing and treatment, and can appropriately refer students to off-campus clinical services. Staff must maintain confidentiality of students seeking services. Facilities should be privately located and operate during flexible hours. Inviting mobile clinics that provide both family planning and HIV counseling and testing to campus can be particularly effective. Additionally, HLI faculty and staff should be conversant about SRH needs and be able to adequately refer students for counseling, information, and services.

The majority of HLIs in Mwanza and Shinyanga have some type of health post or center on campus. Health services and capabilities range from having a highly-skilled government clinical officer on-campus to having only first-aid capabilities. As a first-line resource, health facilities on campus can provide students with basic SRH information, select services, and referrals to off-campus care. An advanced on-campus health post can provide contraceptive information and select methods, STI/HIV counseling and testing, breast and cervical cancer screening, voluntary male medical circumcision, and referrals to other service sites within and outside the university as appropriate.[39]

Additionally, students might seek out SRH advice from a variety of staff on campus, including teachers, academic counselors, and residence hall advisors. Thus, it is important for general faculty and staff to have a basic understanding of SRH and to be able to refer if not counsel students themselves about SRH issues.

Although limited evidence-based literature exists about the most effective campus-based SRH healthcare provision at HLIs in sub-Saharan Africa, some evidence does exist in other contexts that may be applicable the Tanzania. Results of a U.S. based HLI study are similar to many of the opportunities and challenges expressed by students and HLI administrators I consulted.[40]

The U.S. study found it was important to students that on-campus resource persons be knowledgeable and professional about SRH issues. In addition to wanting healthcare counselors or providers to be well-versed on SRH, students wanted them to be approachable, caring, welcoming, understanding, and non-judgmental. Moreover, students wanted to feel comfortable and to feel as though providers listened attentively. Study participants valued individuals who facilitated their access to SRH resources on and off campus. Students also preferred to consult with providers who were the same gender as themselves. [41] HLIs should be thoughtful about the designation and training of campus staff to increase awareness of SRH issues and to be able to refer students for services off-campus.

Inviting SRH services to campus can be another effective way that HLIs can facilitate direct access to health services on campus. At some of the HLI campuses in Shinyanga and Mwanza, visits by mobile HIV clinics to campus are routine. However, broader sexual and reproductive health counseling and services, particularly family planning methods, except aside from condoms, are not widely available. Schools should consider inviting clinical outreach programs offered through governmental or NGOs to provide contraceptives on campus. Evidence shows that mobile outreach services can generally help to broaden the contraceptive method mix available to clients, increasing access to long-acting reversible methods.[42]

Mobile outreach services are already widely available to low-resource, rural settings in Tanzania. In fact, in 2010 over half of the long-acting reversible contraceptives and permanent methods were provided through mobile outreach.[43] Marie Stopes Tanzania has been particularly active in

providing mobile outreach services to disadvantaged areas. The organization has 30 mobile outreach teams serving clients in remote rural areas and a growing team of *bajaj* nurses—nurses on auto-rickshaws—delivering SRH services in peri-urban and urban slum areas. Marie Stopes Tanzania has expressed interest in servicing HLI campuses.

HLIs in Shinyanga are becoming creative in leveraging the resources at their disposal in order to bring SRH services to their campuses. HLIs in the district have a MoU to work with Korandoto College of Health Sciences, which has a network of faculty and student clinicians trained in family planning, to provide SRH information and education to other students attending HLIs in the region. Korandoto students who conduct clinical rotations at local health facilities are well positioned to provide SRH information and education through teaching sessions at nearby HLI campuses.

- ✓ **Facilitate Linkages to Local Youth-Friendly Clinics:** Schools are encouraged to form partnerships with local clinics that provide youth-friendly and stigma-free services. Higher learning institutions should coordinate on-campus visits by local clinicians or NGO providers to routinely provide SRH services directly to students. Additionally, schools should also provide transportation or vouchers to ensure students' easy access to off-campus health facilities and pharmacies.

Although schools are seldom adequately equipped to provide robust clinical services to students, they can play a critical role in linking students to clinical services. There is increasing evidence that interventions that train service providers and take actions to ensure the facility is more youth-friendly, coupled with activities in the community to link or refer young people to health services, can increase the acceptability and accessibility of these health services.[44]

Ideally, adolescent clinical services include prevention, diagnosis, and treatment of STIs and HIV, prevention of cervical cancer, contraceptive information and services and care during pregnancy and childbirth.[45] Optimal services are tailored to the specific age, gender, and socio-cultural needs of young people.[46] Many countries, including Tanzania, are aspiring to provide "youth-friendly" services.

Clinicians can serve as credible sources for adolescents to access information about sex, safer sex, reproduction, sexual negotiation, and refusal skills. Moreover, clinicians play a vital role in the provision of contraception and counseling around sexual decision-making and behavior.[47] In general, aside from male and female sterilization, most contraceptive methods are physiologically safe and appropriate for adolescents to use. However, selection of the most appropriate method for an adolescent should include consideration of the individual's nature of the sexual relationship and behaviors, frequency of intercourse, risk of STIs and HIV, efficacy of contraceptive method, ability to comply with use, ability to tolerate side-effects, availability of services, costs, convenience, religious beliefs, partners' attitudes and other personal factors.[48]

Tanzania has made commitments to expand its youth-friendly services. It has committed to expanding its training of service providers to ensure that clinic staff have increased knowledge, skills, and attitudes necessary to more appropriately respond to the needs of young people. Additional efforts are being made to extend clinic hours, reduce prices, and take measures to increase privacy of youth clients. The regional hospital in Mwanza, for example, does offer youth-friendly services and is open during special weekend hours to service youth in particular. However, surveyed HLI students and administrators were unaware of these nearby services.

By ensuring that adolescents know about available services, schools can help to generate demand and create support for the provision and use of health services by adolescents.

- ✓ **Provide On-Campus Information and Resources**: Widely publicize location, hours, and available services of nearby clinics with posters and pamphlets around campus. Provide female and male condoms, and provide emergency contraception on campus. Promote Mobile for Reproductive Health (m4RH) SMS service among students. Invite local health organizations to conduct SRH-related seminars and guest lectures for students and faculty.

Many schools in Shinyanga and Mwanza provide male condoms on campus. Efforts to increase availability of female condoms and emergency contraception should also be encouraged. Schools can also promote SRH informational materials and provide pamphlets or posters detailing nearby services.

Schools have the ability to promote students' access to SRH information and services through new media resources, such as SMS messages, social media, and websites that have information specific to adolescents. Mobile technologies and the health sector have led to mobile health (mHealth) initiatives that disseminate health information via mobile phones. mHealth and new media initiatives can be well-suited to youth since many HLI students utilize these technologies.[49] Moreover these platforms promote privacy and confidentiality.[50]

Tanzania has a successful text messaging initiative, Mobile for Reproductive Health (m4RH), an opt-in SMS-based health communication program that provides information about nine family planning method as well as a clinic database for users to search nearby service facility locations. The service also provides information about side effects and addresses common rumors and misconceptions associated with different family planning methods. Initially developed and

implemented by FHI360, the SMS platform has proven the feasibility of providing family planning information via text message. The content of m4RH is based on results from FHI360, review of evidence around family planning uptake and continuation, and World Health Organization country-specific guidelines, adapted for delivery via mobile phone. Evaluations have shown that users find m4RH easy to use and understand, report increased knowledge about contraceptive methods, and self-report some degree of behavior change. Young adults (20-29) make up 44% of those reporting on using the service.[51]

Finally, schools are encouraged to invite local organizations to campus to conduct SRH-related seminars and guest lectures for students and faculty. In Mwanza, organizations like UMATI, Marie Stopes Tanzania, and EngenderHealth, could be invited to deliver presentations on campuses.

- ✓ **Teach Comprehensive Sexual and Reproductive Education**: Integrate SRH information and education into schools' training curricula. Offer classes or extra-curricular lectures about SRH to provide students' with knowledge, alongside teaching them negotiation and communication skills related to positive gender dynamics and healthy sexual decision-making. Routinely invite external technical personnel to deliver informative seminars and workshops on SRH issues.

Youth in the developing world report limited knowledge of contraceptive methods and reproductive health, and many hold misconceptions about side effects. Comprehensive SRH education can provide young people with age-appropriate, culturally relevant and scientifically accurate information.[52] Education can help to reduce some of the risks and underlying vulnerabilities to HIV and other STIs, unintended pregnancy, coercive or abusive sexual activity or exploitation. Studies show that effective SRH education can reduce misinformation; increase

knowledge; clarify and strengthen positive values and attitudes; increase skills to make informed decisions and act upon them; improve perceptions about peer groups and social norms; and increase communication with parents or other trusted adults.[53] It should be emphasized that effective sex education programs offer accurate, comprehensive information while working to build adolescents' skills for negotiating sexual behaviors and relationships.[54]

School-based SRH education is one of the most important and widespread ways to help young people understand and avoid risks and improve their reproductive health.[55,56] School settings provide an important platform through which to reach large numbers of young people with SRH education through an appropriate structure with formal curriculum, and, in some cases, before young people become sexually active.[57]

Curriculum-based programs implemented in schools are a critical intervention that can often, although not always, reduce risky sexual behavior. The 2007 *Lancet* article on global perspectives on the sexual and reproductive health of adolescents recommends that policymakers consider curriculum-based programs as an important component of efforts to reach regional and national goals for preventing STIs and early pregnancy in adolescents. This recommendation is based on evidence from a review of the effect of 83 evaluated school-based sex education programs in developed and developing countries.

The findings demonstrate that in nearly two thirds (65%) of the studies reviewed, school health interventions were effective in creating a significant positive effect on one or more of the five reproductive health behaviors assessed. These behaviors included sexual initiation, frequency of

sexual intercourse, number of sexual partners, condom use and contraceptive use. Additionally, many programs had positive effects on the factors associated with sexual risk behaviors, including knowledge, awareness, values, and attitudes towards sexual risk factors and behaviors.[58] Findings of this study also showed that the most effective programs shared 17 common characteristics related to development, implementation and content of curriculum.[59]

Other studies suggest that school-based interventions do not always demonstrate significant impact on sexual behavior risk outcomes, such as reducing HIV, STI, or pregnancy rates.[60] It should be noted, however, that there is increasing concern that some evidence may be biased because of reporting bias whereby young people's improved knowledge of ways to reduce their risk rather than reflecting substantial changes in behaviors.[61] Generally, though, effective sex education programs reduce the amount of sexual risk taking by a third or less. When implemented in isolation, few programs have significant effect on STIs or pregnancy rates.[62]

When designing sexual education programs, HLIs should plan to conduct at least 12 or more sessions in order to address the multitude of needs for information for youth people. Most school-based programs shown to have a positive effect on long-term behavior included twelve or more sessions, and sometimes 30 or more sessions, that last roughly 50 minutes or so each. Additionally, sequential sessions over several years help to reinforce key concepts. HLIs should consider how best to structure sequential learning dependent on length of academic programs.[63]

Well-trained, supported and motivated teachers play a critical role in the provision of quality comprehensive SRH education. Capable and motivated educators should be selected to

implement the curriculum. Ideally, SRH instructors are interested in and comfortable with discussing SRH issue, alongside having medically accurate information and are skilled communicators with students. Educators should be provided with quality training and on-going management, supervision, and oversight.[64]

Thus, it is important that these programs be implemented in tandem with broader programs in the community in order to address social norms that support risk reduction and ensure linkages to clinical services.[65] In order to significantly reduce unintended pregnancies and transmission of HIV and STIs, interventions should also work to address contexts and structural factors that influence sexual behaviors. Although schools may not be well-suited to work for broader societal norm change, they can certainly institute curriculum-based sex education programs that can serve as an effective component and work to refer and link students to larger efforts that get at these overarching societal issues.[66] Skill-based intervention programs can further complement SRH education by helping youth to develop interpersonal skills, critical and creative thinking, decision-making, and self-awareness helpful in making health-related decisions.[67]

- ✓ **Support SRH Clubs & Peer Education Groups:** Encourage students to found SRH clubs to spread information among peers. These groups should be linked to local NGO or government healthcare partners in order to ensure accuracy of information. Faculty or administrative mentors can help to support student activities. Establish peer educator groups to positively role-model and teach sexual health information, as well as to conduct community outreach to mobilize other students and community stakeholders in support of youth services.

Studies conducted of HIV reduction interventions in sub-Saharan Africa showed that curriculum-based, adult-led interventions within schools were largely successful at demonstrating reductions in reported sexual risk behaviors.[68] There is a much less significant evidence base for peer-led

interventions, which generally rely on locally recruited peers from within the same school and involve limited training, to provide education.[69]

Peer-to-peer programs generally focus on interpersonal communication programs that train youth to serve as role models and sources of information for their peers. The format of these programs can include curriculum-based programs where youth share information, values, and beliefs with peers of a similar age or status; small group discussions led by a facilitator; or one-on-one discussions.[70] These programs can take place within the school setting, often with the assistance of teachers or experts. The crux of these programs is for youth to spread information among their peers about SRH and sometimes to distribute contraceptives like condoms.[71]

Systematic reviews find peer-to-peer programs are most frequently evaluated using short-term outcomes and are shown to be effective in changing youth's knowledge and attitudes. However, less evidence exists to show that peer programs improve behaviors related to family planning and fertility outcomes. Studies generally show that peer educators themselves gain significant increases in knowledge and improved attitudes regarding SRH, as well as bolstered leadership skills. But, peer educators' effect on other peers is less significant.[72] Nonetheless, these programs do communicate the acceptance and commitment of HLI administrators to the addressing student SRH needs and support other interventions.

- ✓ **Reduce Violence & Coercion:** Schools should institute zero-tolerance policies for SRH-related violence and coercion. Schools should educate students about their rights and ways to protect themselves from sexual violence and coercion, as long as facilitate referrals and linkages to health and essential services for victims. The accessibility of emergency contraceptives is particularly critical in the event of rape.

In Tanzania, three in ten girls and two in ten boys ages 15-24 reported experiencing force at sexual initiation.[73] 12% of sexually experienced females ages 15-19 reported their first intercourse was forced and against their will.[74] Another survey, the VACS conducted in 2009, showed 28% of 15-24 year old females and 19% of 15-24 year old males ages 15-19 reported their first sex to be unwanted. In this same survey, 28% of females and 19% of males ages 15-19 reported forced sex and their first sexual encounter as well. A sizeable proportion of females and males experience sexual violence during their childhood years. Evidence shows that sexual risk-taking behaviors can be associated with early exposure to sexual violence, including infrequent or no condom use and multiple partners.[75]

Schools serve a critical role in the prevention of sexual harassment, gender-based violence, and aggressive behavior. Schools should advocate policies for zero tolerance of sexual harassment, gender-based violence, bullying and other inappropriate behavior by staff and students.

Emergency contraceptive pills (ECP) are the only form of contraceptives that can be used after sexual intercourse, providing a second chance to prevent unwanted pregnancy.[76] Awareness and knowledge among youth about ECP is not well documented in Tanzania.[77] A study conducted among university students in Dar es Salaam among 350 female students showed that only 57% of them were aware of ECP and only 14% had used them. Moreover, the study revealed that 49% of participants had poor knowledge about ECP and that 42.3% of surveyed pharmacies and 30%

of shops surveyed only stocked one brand of ECP that was not registered by the regulatory Authority.[78] My consultations with students and administrators confirmed that correct knowledge of this method is lacking among youth, even among higher learning institution students. HLIs should work to provide ECP registered by the regulatory Authority through their on-campus health centers or to ensure that students know nearby pharmacies and shops that provide it.

Conclusion

By investing in the sexual and reproductive health of students, higher learning institutions can help to ensure that their pupils remain healthy, are empowered to pursue and complete their schooling, and are equipped to plan their families and careers for years ahead. This will help to ensure a generation of more productive and effective leaders, earners, providers, and parents.

However, HLIs require additional support to bolster their efforts to best support their students. Significant gaps exist in the evidence-base around adolescent sexual and reproductive health best practices. This is particularly true in the post-secondary school context of sub-Saharan Africa. Additional research is required to better understand ways for higher learning institutions to most effectively increase access to SRH information and services for their student populations.
In addition, understanding of national policies among HLI administrators and lack of resources to implement them are a further impediment. However, given the significant interest conveyed by all stakeholders—students, administrators and service providers alike—a focused effort warrants more effort, research, and support. Moving forward, the AFP and UNA Tanzania teams will take advantage of the existing political will and interest to better incorporate SRH into HLIs.

Summary of Capstone & MPH Goals Analysis Intersections

My motivation for enrolling in the MPH program at the Johns Hopkins Bloomberg School of Public Health was my desire to acquire skills and knowledge that would enhance my abilities to contribute to the field of international women's and adolescents' reproductive health. I approached the capstone with the intention to bolster my policy analysis skills. I also aimed to cultivate a deeper understanding of the critical issues and evidence-based policy interventions specific to adolescent reproductive health and education.

Through this capstone project, I have exercised my analytical competencies through my research of the Tanzanian policy environment related to youth sexual and reproductive health and education. Moreover, my primary stakeholder consultations in Tanzania permitted me to scrutinize the translation and implementation of national policies at the local level and to identify outstanding gaps and opportunities for increasing access to youth SRH services. Conducting an overview landscaping and policy review and developing recommendations further pushed me to critically assess Tanzania's policy environment along with reviewing the evidence base for best practice adolescent SRH services. This learning was further crystallized for me through my work to develop for the AFP team two policy briefs, one to inform national policymakers about the importance of SRH in HLIs and the other to share these HLI-specific recommendations with HLI administrators.

This endeavor also afforded me firsthand experience liaising with stakeholders to develop an evidence-base around the need and opportunity of better providing services to youth populations. Consulting with post-secondary students firsthand provided me with a unique perspective and

directly meeting with HLI administrators allowed me to better understand how school leaders can better ensure access to services. In conclusion, I come away from this work with a much deeper understanding of the biases, constraints, evidence-based interventions, and still large gaps existing in efforts to most effectively reach youth with appropriate services.

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