

African Journal of Reproductive Health

Friday Okonofua, Editor

ISSN: 1118-4841

www.ajrh.info

AJRH Editorial Office:

editor@ajrh.info

africanjournalofreproductiveH@gmail.com

BrownWalker Press

Boca Raton, Florida, USA • 2013

ISBN-10: 1-61233-738-4 \ ISBN-13: 978-1-61233-738-8

www.brownwalker.com

Published by:



Women's Health and Action Research Centre

KM 11 Benin-Lagos Expressway

Igue-Iheya, Benin City, Edo State, Nigeria

Email: wharc@hyperia.com

www.wharc-online.org

WHARC receives core funding and support from the Ford Foundation and technical cooperation and mentorship from International Perspectives on Sexual and Reproductive Health and Studies in Family Planning

AJRH is a member of the committee on Publication Ethics

African Journal of Reproductive Health

Editor: Friday Okonofua

VOLUME 17 NUMBER 4

December 2013

CONTENTS

Editorial

- Documenting new HIV/AIDS Research and Interventions in Sub-Saharan Africa 9-16
Friday Okonofua
- Improving Health Services for Adolescents Living with HIV in Sub-Saharan Africa: A Multi-country Assessment 17-31
Edward Pettit, Rena Greifinger, Ryan Phelps and Sara Bowsky
- Why are Virgin Adolescents Worried about Contracting HIV/AIDS? Evidence from Four Sub-Saharan African Countries 32-50
Georges Guiella, Simona Bignami and Thomas K. LeGrand
- Drivers of Young People's Attitudes towards HIV/AIDS Stigma and Discrimination: Evidence from Ghana 51-59
Joshua Amo-Adjei and Eugene K.M. Darteh
- Knowledge, Attitudes and Practices about HIV Testing and Counselling among Adolescent Girls in Some Selected Secondary Schools in Malawi 60-68
Alister C. Munthali, Peter Mvula and Dixie Maluwa-Banda
- A Review of HIV/AIDS Awareness and Knowledge of Preventive Methods in Ghana 69-82
Edward Nketiah-Amponsah and Gloria Afful-Mensah
- Estimating the Number of Male Sex Workers with the Capture-Re-capture Technique in Nigeria 83-89
Sylvia B. Adebajo, George I. Eluwa, Jack U. Tocco, Babatunde A. Ahonsi, Lolade Y. Abiodun, Oliver A. Anene, Dennis O. Akpona, Andrew S. Karlyn and Scott Kellerman
- Transactional Sex, Condom and Lubricant Use among Men who Have Sex with Men in Lagos State, Nigeria 90-98
O.O. Ayoola, A.O. Sekoni and K.O. Odeyemi
- Sexual and Reproductive Health in HIV Serodiscordant Couples 99-106
Christian C. Makwe and Osato F. Giwa-Osagie
- Intrapartum Management for Prevention of Mother-To-Child Transmission of HIV in Resource-Limited Settings: A Review of the literature 107-117
K. Cherry Liu and Carla J. Chibwasha

A Qualitative Analysis of the Barriers and Facilitators to Receiving Care in a Mother-To-Child HIV Prevention Program in Nkhoma, Malawi <i>Ngozi D. Iroezi, Deborah Mindry, Paul Kawale, Grace Chikowi, Perry A. Jansen and Risa M. Hoffman</i>	118-129
Scaling up Prevention of Mother to Child Transmission of HIV Infection to Primary Health Facilities in Nigeria: Findings from Two Primary Health Centres in Northwest Nigeria <i>Babasola O. Okusanya, Adewale O. Ashimi, Egbaname O. Aigere, Siyaka E Salawu and Rakiya Hassan</i>	130-137
Declining Rates of Maternal HIV Infection Detected at Delivery in North Central Nigeria <i>G. E. Imade, A. S. Sagay, J. Musa, A. N. Ocheke, D.S. Adeniyi, M. Idighri, R. Powl, Sendeht, J.P. Ogwuche, M. Elujoba, C.O. Egbodo, T. Oyebode, P. Daru, O. Agbaji, I.C. Pam, S. T. Meloni, P. Okonkwo and P.J. Kanki</i>	138-145
Methodological Issues in HIV-Related Social Research in Nigeria <i>Olayiwola Erinosh, Richard Joseph, Uche Isiugo-Abanihe, Nkem Dike and Adeyinka A. Aderinto</i>	146-155
The Relationship Between Female Genital Mutilation and HIV Transmission in Sub-Saharan Africa <i>Abimbola A. Olaniran</i>	156-160
Sexual Dysfunction among HIV Patients: Three Case Reports and Review of Literature <i>V.M. Lema</i>	161-170
Community Mobilization for Home-based HIV Testing and Counselling: Continuity of Care <i>Constance Shumba, Lydia Atuhaire, Peter Memiah and Ruth Atukunda</i>	171-176
Psychological Disorders among Human Immunodeficiency Virus-Infected Adults in Southern Nigeria <i>Caroline E. Ofovwe and Catherine E. Ofovwe</i>	177-182
Information for Authors	183-186
Subscription Information and Advert Rate	187-188

ABOUT AJRH

African Journal of Reproductive Health (AJRH) is published by the Women's Health and Action Research Centre (WHARC). It is a multidisciplinary and international journal that publishes original research, comprehensive review articles, short reports and commentaries on reproductive health in Africa. The journal strives to provide a forum for African authors, as well as others working in Africa, to share findings on all aspects of reproductive health, and to disseminate innovative, relevant and useful information on reproductive health throughout the continent.

AJRH is indexed and included in Index Medicus/MEDLINE. The abstracts and tables of contents are published online by INASP at <http://www.ajol.info/ajol/> while full text is published at <http://www.ajrh.info> and by Bioline International at <http://www.bioline.org.br/>. It is also abstracted in *Ulrich's Periodical, Feminist Periodicals African Books Publishing Records*.

Women's Health and Action Research Centre

Km 11, Benin-Lagos Express Way

Igue-Iheyia

P.O. Box 10231, Ugbowo

Benin City, Edo State, Nigeria

Email: wharc@hyperia.com or africanjournalofreproductiveH@gmail.com

WHARC website: <http://www.wharc-online.org>

AJRH website: <http://www.ajrh.info>

The Women's Health and Action Research Centre (WHARC) is a registered non-profit organization, committed to the promotion of women's reproductive health in sub-Saharan Africa. Founded in 1995, the centre's primary mission is to conduct multidisciplinary and collaborative research, advocacy and training on issues relating to the reproductive health of women. The centre pursues its work principally through multidisciplinary groups of national and international medical and social science researchers and advocates in reproductive health.

WHARC receives core funding and support from the Ford Foundation and technical cooperation and mentorship from International Perspectives on Sexual and Reproductive Health and Studies in Family Planning. Principal funding for the journal comes from the Consortium on Unsafe Abortion in Africa. The goal of the centre is to improve the knowledge of women's reproductive health in Nigeria and other parts of Africa through collaborative research, advocacy, workshops and seminars and through its series of publications – the *African journal of Reproductive Health*, the *Women's Health Forum* and occasional working papers.

ISSN: 1118-4841

Women's Health and Action Research Centre @2013

Revue Africaine de Santé de la Reproduction

Editor: Friday Okonofua

VOLUME 17 NUMÉRO 4

December 2013

SOMMAIRE

Editoriaux

- Documenter les nouvelles recherches et interventions au sujet du VIH / SIDA en Afrique subsaharienne 9-16
Friday Okonofua
- Améliorer les services de santé destinés aux adolescents vivant avec le VIH en Afrique subsaharienne: Une évaluation à travers plusieurs pays 17-31
Edward Petit, Rena Greifinger, Ryan Phelps et Sara Bowsky
- Pourquoi les adolescents Vierges ont-ils peur de contracter le VIH/SIDA? Evidence recueillie de quatre pays d'Afrique subsaharienne 32-50
Georges Guiella, Simona Bignami et Thomas K. LeGrand
- Dynamismes des attitudes des jeunes gens envers la stigmatisation et la discrimination associées au VIH/SIDA : Expérience recueillie au Ghana 51-59
Joshua Amo-Adjei et Eugene KM Darteh
- Connaissances, attitudes et pratiques concernant le dépistage et le conseil du VIH parmi les adolescentes dans certaines écoles secondaires choisies au Malawi 60-68
Alister C. Munthali, Peter Mvula et Dixie Maluwa-Banda
- Examen de la conscience et la connaissance des méthodes de prévention contre le VIH/SIDA au Ghana 69-82
Edward Nketiah-Amponsah et Gloria Afful-Mensah
- Estimation du nombre des hommes prostitués à l'aide de la technique de Capturer-Ré capturer au Nigeria 83-89
Sylvia B. Adebajo , George I. Eluwa , Jack U. Tocco , Babatunde A. Ahonsi , Lolade Y. Abiodun , Oliver A. Anene , Dennis O. Akpona , Andrew S. Karlyn et Scott Kellerman
- Sexe transactionnel, préservatifs et utilisation du lubrifiant chez les hommes qui ont des rapports sexuels avec les hommes dans l'Etat de Lagos, au Nigeria 90-98
O.O. Ayoola, A.O. Sekoni et K.O. Odeyemi
- Santé sexuelle et de la reproduction chez les couples sérodiscordants 99-106
Christian C. Makwe et Osato F. Giwa-Osagie

Gestion Intrapartum pour la prévention de la transmission du VIH de la mère à l'enfant dans les milieux à ressources limitées : Une revue de la documentation <i>K. Cherry Liu et Carla J. Chibwasha</i>	107-117
Analyse qualitative des obstacles et les facilitateurs à l'accès des soins dans un programme de prévention du VIH de la mère à l'enfant dans Nkhoma, Malawi. <i>Ngozi D. Iroezi, Deborah Mindry, Paul Kawale, Grace Chikowi, Perry A. Jansen et Risa M. Hoffman</i>	118-129
Intensification de la prévention de la transmission du VIH de la mère à l'enfant aux établissements de santé primaire au Nigeria: Résultats venant de deux centres de santé primaire du nord-ouest du Nigeria. <i>Babasola O. Okusanya, Adewale O. Ashimi, Egbaname O. Aigere, Siyaka E. Salawu et Rakiya Hassan</i>	130-137
Baisse du taux d'infection par le virus de l'immunodéficience humaine maternelle dans les unités d'accouchement dans le centre-nord du Nigeria <i>G. E. Imade, A. S. Sagay, J. Musa, A. N. Ocheke, D.S. Adeniyi, M. Idighri, R. Powl, Sendeht, J.P. Ogwuche, M. Elujoba, C.O. Egbodo, T. Oyebode, P. Daru, O. Agbaji, I.C. Pam, S. T. Meloni, P. Okonkwo et P.J. Kanki</i>	138-145
Questions méthodologiques dans la recherche sociale liée au SIDA au Nigéria <i>Olayiwola Erinosh, Richard Joseph, Uche Isiugo-Abanihe, Nkem Endiguer et Adeyinka A. Aderinto</i>	146-155
Relation entre les mutilations génitales féminines et la transmission du VIH en Afrique subsaharienne <i>Abimbola A. Olaniran</i>	156-160
Dysfonction sexuelle chez les patients séropositifs: Trois rapports de cas et un examen de la documentation <i>V.M. Lema</i>	161-170
Évaluation de la mobilisation de la communauté et le conseil et l'analyse du VIH à domicile offerts par les établissements de santé en Ouganda rural <i>Constance Shumba, Lydia Atuhair, Peter Memiah et Ruth Atukunda</i>	171-176
Troubles psychologiques chez les adultes infectés par un virus d'immunodéficience humaine dans le sud du Nigeria <i>Caroline E. Ofovwe et Catherine E. Ofovwe</i>	177-182
Information Pour Les Auteurs	183-186
Subscription Information et frais d'annonce	187-188

APROPOS AJRH

La Revue Africaine de santé de la Reproduction (RASR) est publiée par le Women's Health and Action Research Centre (WHARC). C'est une revue à la fois pluridisciplinaire et internationale qui publie des articles de recherche originaux, des articles de revue détaillés, de brefs rapports et des commentaires sur la santé de la reproduction en Afrique. La Revue s'efforce de fournir un forum aussi bien à des auteurs africains qu'à des professionnels qui travaillent en Afrique, afin qu'ils puissent partager leurs découvertes dans tous les aspects de la santé de reproduction et diffuser à travers le continent, des informations innovatrices, pertinentes et utiles dans ce domaine de santé de la reproduction.

La RASR est indexée et figure sur l'Index Medicus/MEDLINE. Les résumés et les tables des matières sont publiés en ligne par INASP sur le site web <http://www.ajol.info/ajol> tandis que le texte est publié à <http://www.ajrh.info> par Bioline International sur le site web <http://www.bioline.org.br/>. Il est également résumé dans *Ulrich Periodical, feminist Periodical et African Books Publishing Records*

Women's Health and Action Research Centre

Km11, Benin-Lagos Express Way

P.O Box 10231, Igue-Iheyà

Benin City, Edo State, Nigeria

<http://www.wharc-online.org>

<http://www.ajrh.info>

Le WHARC est une organisation non gouvernementale à but non-lucratif s'engageé dans la promotion de santé de la reproduction chez la femme en Afrique sub-saharienne. Fondé en 1995, le Centre a pour objectif principal de mener des recherches pluridisciplinaires et en collaboration, de promouvoir et de former des cadres en matières relatives à la santé de la reproduction chez la femme. Le Centre travaille surtout à travers des groupes multidisciplinaires de chercheurs aussi bien nationaux qu'internationaux en sciences médicales et en sciences économiques dans le domaine de santé de la reproduction.

Le WHARC recoit une aide financière principale de la Fondation Ford et bénéficie de la coopération technique de l'*International Perspectives on Sexual and Reproductive Health* et de *Studies in Family Planning*. Le financencement principale pour la revue vient de la part du Consortium on Unsafe Abortion in Africa. L'objectif du Centre est d'améliorer la connaissance en matière de santé de la reproduction chez la femme au Nigeria et dans d'autres régions d'Afrique à travers la recherche en collaboration, le paidoyer, des ateliers et des séminaires à travers des séries de publication - *La Revue africaine de santé de la reproduction, Le Women's Health Forum* et des rapports des recherches de circonstance.

STAFF AND EDITORIAL BOARD MEMBERS

Editor

Friday Okonofua	Nigeria	Allan Hill	USA
		Margaret Hoffman	South Africa

Editor (French)

Cyril Mokwenye	Nigeria		
----------------	---------	--	--

Assistant Editors

Clifford Odimegwu	Nigeria	Albrecht Jahn	Germany
Michael Okobia	Nigeria	Phyllis Kanki	USA
Patrick Erah	Nigeria	Annette Kapaun	Germany
Babatunde Ahonsi	Nigeria	Saidi Kapiga	Tanzania
		Joan Kaufman	China
		Peju Olukoya	Switzerland

Managing Editor

Theresa I. Ezeoma	Nigeria	Mere Kissekka	Ethiopia
		O.A Ladipo	UK
		Ulla Larsen	USA

Assistant Managing Editor

Emiowele O. Maryjane	Nigeria	Adetokunbo Lucas	Nigeria
		Florence Manguyu	Kenya
		Gernard Msamanga	Tanzania

Computer Typesetter

Ernest Godfrey	Nigeria	Osato Giwa Osagie	Nigeria
		Michael Mbizo	Switzerland
		Ester Mwaikambo	Tanzania

Subscription Officer

Emiowele O. Maryjane	Nigeria	Fredrick Naftolin	USA
		Carla Obermeyer	USA
		Grace Wyshak	USA
		Michael Reich	USA
		Khama Rogo	Kenya
		A. Orubuloye	Nigeria

Cover Design

Shereen Siddiqui	New York, USA	Jenni Smit	South Africa
		Frank Van Balen	Netherlands
		Kesley Harrison	Finland

Editorial Advisory Board

Rachel Snow	USA	Joseph Otubu	Nigeria
Alayne Adams	USA	William Pick	South Africa
Adetunji Adewuyi	Nigeria	Helen Rees	South Africa
Lawrence Adekun	Nigeria	John Caldwell	Australia
Simi Afonja	Nigeria	Sarah Castle	USA
Wole Akande	Nigeria	Mandou Shabot	Egypt
Nimi Briggs	Nigeria	Iqbal Shah	Switzerland
Pitt Reitmaier	Germany	Richard Turkson	Ghana
Lincoln Chen	USA	Kim Dickson-Tetteh	South Africa
John Cleland	United Kingdom	Staffan Bergstrom	Sweden
Sylvia Deganus	Ghana	Mags Beksinska	South Africa
Michel Garnet	France	Lindsay Edouard	USA
Olufemi Olatunbosun	Canada	Dozie Ikedife	Nigeria
		Kunle Odunsi	USA

EDITORIAL

Documenting New HIV/AIDS Research and Interventions in Sub-Saharan Africa

Friday Okonofua

Editor, African Journal of Reproductive Health

Available evidence indicates that sub-Saharan Africa has the highest prevalence of the human immunodeficiency virus and the Acquired Immune Deficiency Disease (HIV/AIDS) in the world. Of the 35.3 million persons living with HIV/AIDS by the end of 2012, nearly 70% were resident in sub-Saharan Africa (with an overall prevalence of 4.9%). Of this, nearly 34% resided in 10 countries in Southern Africa, making this region the epicentre of the pandemic. Estimates indicate that over 69% of global AIDS deaths occur in sub-Saharan Africa annually, while up to 31% of new infections and 34% of global AIDS deaths occurred in the continent in 2012. However, there is evidence that some progress is being made with stabilizing or declining infections achieved in countries such as Malawi, Namibia and Rwanda. Recent UNAIDS data¹ suggests that a 33% decrease in AIDS-related deaths occurred in Africa between 2005 and 2011, with a 7-fold increase in number of HIV positive people receiving antiretroviral treatment during the period. Despite this, sub-Saharan Africa still lags behind other regions in attaining the global goal of achieving 80% universal access to anti-retroviral treatment and prevention measures.

It is within this context that the *African Journal of Reproductive Health (AJRH)* launched this special edition to document recent research findings and interventions in efforts to prevent HIV/AIDS in the African continent. Despite years of international donor support for reducing the burden of HIV/AIDS in Africa, it is becoming evident that only a strategy focused on country ownership and community/stakeholders participation in intervention design and implementation stands a chance of gaining sustained impact in tackling the disease. Specifically, AJRH launched this edition to document some of the most painstaking

indigenous efforts being made to prevent the disease, and to provide care and support for infected and affected persons in the African continent. We believe this would open up renewed enthusiasm and commitments for scaling up some of the most enterprising and effective solutions for combatting the disease in the continent.

Four categories of research and interventions on HIV/AIDS are featured in this edition of the journal. The first set deals with the nagging problem of the higher susceptibility of adolescents and young people for acquiring HIV/AIDS in the continent. Available data suggest that a large proportion of new infections in many parts of the continent occur in adolescents, with female adolescents demonstrating a greater tendency to acquire the infection. Indeed, the higher predisposition of young girls to HIV/AIDS acquisition as compared to boys speaks of the greater social and economic inequality suffered by girls as compared to boys. Apart from girls being less likely to have access to information and services, the paper by Amo-Adjei and Darteh² from Ghana suggests that HIV stigma may be at the root of young people's inability to access services, a burden that is borne more severely by girls as compared to boys. Efforts to deal with the epidemic in Africa must therefore address the prevailing cultural and social norms that prevent evidence-based information and services from reaching young people, especially vulnerable girls.

The second sets of papers present a framework for realistically addressing the high prevalence of HIV/AIDS among male sex workers, a highly vulnerable population in the region. While men who have sex with men (MSMs) are increasingly recognized as sources of new HIV infections in the African continent, there continues to be official reluctance to recognize them and to address their

needs. In particular, there is increasing penceance for many African countries to outlaw the practice of same sex relationships, which has tended to drive the practice underground and prevent the integration of MSMs into official channels of HIV prevention and care. Yet, the HIV prevalence rate among MSM in Africa is nearly 4 times higher than that in the general population³, with rates ranging between 11-15% in Cote d'Ivoire and Zanzibar, and exceeding 15% in many countries such as Benin, Ghana, Kenya, Mali, Mauritania, Niger, Nigeria and Senegal. Despite this grim statistics, many African countries such as Kenya, Uganda and Nigeria have passed questionable homophobic laws that hamper emerging efforts to deal with the disease in this high-risk group. The paper by Sylvia Adebajo and her colleagues from the office of the Population Council in Nigeria⁴ show that it is possible to engage communities of MSMs in legally and socially restrictive settings in research and interventions aimed at mitigating the impact of the disease. Using a novel "capture-recapture" method, the group was able to estimate the number of male sex workers in urban Lagos. Such an approach is recommended for further exploration as a crucial method for reaching MSMs with needed reproductive health information and services for HIV prevention and care in contexts where same sex relationships are socially and legally restricted.

The paper by Ayoola and his group⁵ also provide evidence of the compelling need for reproductive health services among MSMs resident in metropolitan Lagos. As shown, only a small proportion of the MSMs captured in the study regularly use condoms during anal sexual intercourse, with many not having a ready source of supply for the commodity. The integration of comprehensive sexuality and reproductive health information and services to the delivery of care for all categories of sexually active people, as part of the recognition of the right to free sexual choice for all persons, will be crucial in efforts to achieve sustainable reduction in the burden of HIV/AIDS in the African continent.

The third sets of papers in this edition of the journal are those that address the prevention of mother to child transmission of the virus. To date,

it is widely known that countries in East and Southern Africa have the highest proportion of pregnant women living with the virus in the world, with South Africa having the highest rate of infection. Although Nigeria has a lower proportion of HIV-positive pregnant women, its high population makes it the country with the second absolute numbers of pregnant women living with the HIV virus in the world. With comprehensive antiretroviral treatment, it is now possible to reduce the burden of HIV transmission from mother to child from nearly 40% to less than 5%. UNAIDS data¹ indicate that the coverage of services for the prevention of mother-to-child transmission (PMTCT) of HIV in sub-Saharan Africa reached 59% (CI 43-66%) in 2011. Six countries – Botswana, Ghana, Namibia, South Africa, Swaziland and Zambia – achieved coverage rates in excess of 75%, with South Africa and Botswana attaining over 95% coverage. By contrast, seven countries reported PMTCT coverage of less than 25%, including Angola, Chad, Congo, Eritrea, Ethiopia, Nigeria and South Sudan. Nigeria with a coverage rate of only 15% has one of the highest rates of HIV infection in children in the world, recording an astonishing 60,000 infected children each year⁶.

Three papers in the journal illustrate the continuing efforts to implement PMTCT of HIV in various parts of Africa. The paper by Iroezi and colleagues⁷ present data that illuminate the factors that act as barriers or facilitators to women receiving care in a PMTCT program in Malawi, a country currently implementing one of the most progressive policies on PMTCT in Africa. This paper provides an approach for scaling up some of the best practices relating to PMCTC, not only in Malawi but in the entire African region. It demonstrates what can be achieved when a country deploys its arsenal of resources for tackling the disease in some of its most vulnerable populations. A second paper by Imade and colleagues⁸ from Jos, North-Central Nigeria provides evidence of declining rates of maternal HIV infection in women attending tertiary institutions for delivery. A major limitation of the study is the non-use of community collated data. In a country where up to 60% of women deliver

outside the hospital, it is not known to what extent such hospital generated data can be generalized to the rest of the population. Nevertheless, the fact that rates were lower in the same hospital compared to previous years, may suggest a declining rate of infection in hospital attended deliveries.

The third paper on PMTCT is an important paper that describes the progress made in scaling up the prevention of mother to child transmission within primary health care settings in North-West Nigeria. The Primary Health care system is the entry point into health care systems in many parts of Africa and is the form of care that is most accessible and affordable to some of the most vulnerable populations in the continent. Yet, there have been limited attempts to integrate the provision of HIV services into this level of care. The paper by Okusanya and colleagues⁹ indicates that efforts to scale up PMTCT within primary health care are achievable. The approach is recommended to all governments in sub-Saharan Africa as a model for achieving sustainable PMTCT service delivery in the continent.

The last sets of papers in this edition of the journal can best be described as a mix bag that covers some of the neglected topics on HIV research and innovations in Africa. They range from a paper that describes the methodological and ethical issues relating to HIV research and intervention in Africa¹⁰ to a paper that examines the old question as to whether HIV transmission is facilitated by the cultural practice of female genital cutting¹¹. The two papers speak of the deficit of research for addressing some of the most pressing and unanswered questions relating to HIV transmission in the continent. There are also papers that address the yet un-navigated areas of sexual dysfunction¹² and psychological disorders¹³ that may be associated with the experience of HIV/AIDS.

In conclusion, this edition of AJRH is a compilation of emergent issues relating to HIV/AIDS prevention and care in sub-Saharan Africa. Written by advocates and researchers in the frontline of impactful social change, it provides scientific evidence of the most endearing indigenous efforts being made to scale up the

prevention of the virus in the continent. Efforts to deepen participatory ownership of HIV/AIDS control and to leverage political commitment and support for scaling up the best interventions will be the most effective ways to achieve sustainable reduction in the prevalence of HIV/AIDS in sub-Saharan Africa in the foreseeable future.

Conflict of Interest

None

References

1. UNAIDS Report on the Global Epidemic :<http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2012/gr2012/21> Retrieved October 26, 2013.
2. Amo-Adjei J, Darteh EKM. Drivers of young people's attitudes towards stigma and discrimination: evidence from Ghana. *Afr J Reprod Health* 2013 (Special Edition); 17[4]: 51-59.
3. AmfAR AIDS Research. MSM, HIV and the road to universal access – how far have we come? Special Report, 2008. Accessed from: http://www.amfar.org/uploaded_files/In_the-Community. October 29, 2013.
4. Adebajo SB, Eluwa GI, Tocco JU et al. Estimating the number of male sex workers with the capture-recapture technique in Nigeria. *Afr J Reprod Health* 2013 (Special Edition); 17[4]: 83-89.
5. Ayoola OO, Sekoni AO, Odeyemi KO. Transactional Sex, Condom and Lubricant use among Men who have Sex with Men in Lagos state, Nigeria. *Afr J Reprod Health* 2013 (Special Edition); 17[4]: 90-98.
6. National Action Committee on AIDs. 2013. National HIV trend 1991-2008. NACA, Abuja, Nigeria.
7. Iroezi ND, Mindry D, et al. A qualitative analysis of the barriers and facilitators to receiving care in a mother-to-child prevention program in Nkhoma, Malawi. *Afr J Reprod Health* 2013 (Special Edition); 17[4]: 118-129).
8. Imade GE, Sagay AS, Musa J, et al. Declining rates of maternal HIV infection detected at delivery in north central Nigeria. *Afr J Reprod Health* 2013 (Special Edition); 17[4]: 138-145).
9. Okusanya BO, Ashimi AO, et al. Scaling up prevention of mother to child transmission of HIV infection to primary health facilities: evidence from two primary health centres in Northwest Nigeria. *Afr J Reprod Health* 2013 (Special Edition); 17[4]: 130-137).
10. Erinsho O Joseph R et al. Research methodological issues in HIV-related social research in Nigeria. *Afr J Reprod Health* 2013 (Special Edition); 17[4]: 146-155).
11. Olaniran AA. The relationship between female genital

12. Lema VM. Sexual dysfunction among HIV patients. Three case reports and review of the literature. *Afr J Reprod Health 2013 (Special Edition); 17[4]: 156-160.*
13. Ofovwe CE, Ofovwe CE. Psychological disorders among human immunodeficiency virus-infected adults in Southern Nigeria. *Afr J Reprod Health 2013 (Special Edition); 17[4]: 177-182.*

Editoriaux

Documenter les nouvelles recherches et interventions au sujet du VIH / SIDA en Afrique subsaharienne

Friday Okonofua

Rédacteur en chef, *Revue africaine de santé de la Reproduction*

Les données disponibles indiquent que l'Afrique subsaharienne a la plus forte prévalence du virus de l'immunodéficience humaine et de la maladie d'immunodéficience acquise (VIH / sida) dans le monde. Sur les 35,3 millions personnes vivant avec le VIH / SIDA vers la fin de 2012, près de 70% résidaient en Afrique subsaharienne (avec une prévalence globale de 4,9%). De ce montant, près de 34 % résidaient dans 10 pays d'Afrique australe, faisant de cette région l'épicentre de la pandémie. Les estimations indiquent que plus de 69 % des décès liés au sida dans le monde entier se produisent en Afrique subsaharienne chaque année, alors que jusqu'à 31% des nouvelles infections et 34% des décès liés au sida dans le monde entier se sont produits sur le continent en 2012. Cependant, il existe des preuves que certains progrès réalisent avec la stabilisation ou le déclin des infections dans les pays tels que le Malawi, la Namibie et le Rwanda. Les données¹ venant de la part de l'USAID (Agence américaine d'aide pour le développement international) suggèrent qu'une diminution de 33% des décès liés au sida est survenue en Afrique entre 2005 et 2011, avec une augmentation de 7 fois en nombre de personnes séropositives qui subissent des traitements antirétroviraux au cours de la période. Malgré cela, l'Afrique subsaharienne reste à la traîne des autres régions dans la réalisation de l'objectif global d'atteindre 80% de l'accès universel au traitement anti- rétroviral et des mesures de prévention.

C'est dans ce contexte que la *Revue africaine de santé de la reproduction* (RASR) a lancé cette édition spéciale pour documenter les résultats de la recherche et les efforts récents vers la prévention du VIH / sida sur le continent africain. Malgré la vague croissante de l'appui des donateurs internationaux pour réduire le fardeau du VIH / sida en Afrique, il est de plus en plus évident que

seule une stratégie axée sur l'appropriation nationale et communautaire / la participation des parties prenantes dans la conception et la mise en œuvre de l'intervention a une chance d'avoir un impact durable dans la lutte contre la maladie. Plus précisément, le RASR a lancé cette édition pour documenter certaines des initiatives autochtones les plus laborieuses et innovantes qui visent à éviter la maladie et à fournir des soins et un soutien aux personnes infectées et affectées dans le continent africain. Nous sommes persuadé que ceci ouvrirait une vanne d'enthousiasme et d'engagement pour intensifier certaines des solutions les plus entreprenantes et efficaces pour lutter contre la maladie dans le continent.

Quatre catégories de recherche et d'intervention sur le VIH / sida sont en vedette dans ce numéro de la revue. La première série porte sur le problème lancinant de la plus grande vulnérabilité des adolescents et des jeunes de contracter le VIH / SIDA dans le continent. Les données disponibles indiquent qu'une proportion importante de nouvelles infections dans de nombreuses parties du continent se produit chez les adolescents, les adolescentes faisant preuve d'une plus grande prédilection pour acquérir l'infection. En effet, la plus grande prédisposition des jeunes filles à l'acquisition du VIH / SIDA par rapport aux garçons indique l'accroissement des inégalités sociales et économiques subies par les filles par rapport aux garçons. A part le fait que les filles sont moins susceptibles d'avoir accès à l'information et aux services, l'article d'Amo-Adjei et Darteh² du Ghana suggère que la stigmatisation du VIH peut être à l'origine de l'incapacité des jeunes à accéder aux services, un fardeau que supportent plus sévèrement par les filles par rapport aux garçons. Les efforts déployés pour faire face à l'épidémie en Afrique doivent

donc répondre aux normes sociales et culturelles dominantes qui empêchent l'information et de services fondée sur les preuves d'atteindre les jeunes, surtout les jeunes filles vulnérables.

La deuxième série de documents présentent un cadre pour aborder de façon réaliste la forte prévalence du VIH / sida parmi les prostituées, une population très vulnérable dans la région. Alors que les hommes qui ont des rapports sexuels avec des hommes (HSH) sont de plus en plus reconnus comme des sources de nouvelles infections du VIH dans le continent africain, il continue d'y avoir une réticence officielle à les reconnaître et à s'occuper de leurs besoins. En particulier, il y a de plus en plus penchant dans de nombreux pays africains à interdire la pratique des relations du même sexe, ce qui a eu la tendance à la pratique clandestine et à empêcher l'intégration des HSH dans les voies officielles de la prévention et du soin du VIH. Pourtant, le taux de prévalence du VIH chez les HSH en Afrique est près de 4 fois plus élevé que dans la population générale³, avec des taux qui se varient entre 11% et 15 % en Côte d'Ivoire et au Zanzibar, et dépasse 15% dans de nombreux pays tels que le Bénin, le Ghana, le Kenya, le Mali, la Mauritanie, le Niger, le Nigeria et le Sénégal. Malgré ce sombre tableau, de nombreux pays africains tels que le Kenya, l'Ouganda et le Nigeria ont adopté des lois homophobes douteuses qui entravent les efforts émergents pour faire face à la maladie dans ce groupe à haut risque. L'article de Sylvia Adebajo et ses collègues du bureau du Population Council au Nigeria⁴ montre qu'il est possible d'associer les communautés de HSH dans des milieux socialement et légalement contraignant dans la recherche et les interventions visant à atténuer l'impact du VIH / SIDA. A l'aide d'une méthode innovatrice « capture-recapture », le groupe a été en mesure d'estimer le nombre des prostituées à Lagos urbaine. Une telle approche unique est recommandée comme une méthode efficace pour atteindre les HSH avec les informations nécessaires sur la santé de la reproduction et les services de prévention et de soins du VIH dans les contextes où les relations homosexuelles sont socialement et légalement limitées.

L'article de Ayoola et son équipe⁵ fournir la preuve de la nécessité impérieuse pour les services

de santé de la reproduction chez les HSH qui résident dans la métropole de Lagos. Comme nous l'avons indiqué, seule une petite proportion des MSM captés dans l'étude utilisent régulièrement des préservatifs lors des rapports sexuels, beaucoup d'entre eux n'ont pas de source immédiate de l'approvisionnement du produit. L'intégration des informations complètes sur la sexualité et des services de santé de la reproduction à la prestation des soins pour toutes les catégories de personnes sexuellement actives, dans le cadre de la reconnaissance du droit au choix sexuel gratuit pour toutes les personnes, sera cruciale dans les efforts pour parvenir à une réduction durable dans le fardeau du VIH / sida sur le continent africain.

La troisième série de documents dans cette édition de la revue sont ceux qui traitent de la prévention de la transmission du virus de la mère à l'enfant. À ce jour, il est largement connu que les pays d'Afrique orientale et australe ont la plus forte proportion de femmes enceintes vivant avec le virus dans le monde, avec l'Afrique du Sud ayant le plus haut taux d'infection. Bien que le Nigeria ait une plus faible proportion de femmes enceintes séropositives, sa forte population le classe comme le deuxième pays avec le nombre absolu de femmes enceintes vivant avec le VIH dans le monde. Avec un traitement antirétroviral complet, il est désormais possible de réduire le fardeau de la transmission du VIH de la mère à l'enfant de près de 40% à moins de 5%. Les données de l'USAID¹ indiquent que la couverture des services de prévention de la transmission de la mère à l'enfant (PTME) du VIH en Afrique subsaharienne a atteint 59% (IC 43-66 %) en 2011. Six pays - le Botswana, le Ghana, la Namibie, l'Afrique du Sud, le Swaziland et la Zambie - ont atteint des taux de couverture de plus de 75 %, l'Afrique du Sud et le Botswana ayant atteint plus de 95% de couverture. En revanche, sept pays ont déclaré une couverture de PTME de moins de 25%, y compris l'Angola, le Tchad, le Congo, l'Erythrée, l'Éthiopie, le Nigeria et le Soudan du Sud. Le Nigeria, avec un taux de couverture de seulement 15%, a l'un des taux les plus élevés du monde d'infection du VIH chez les enfants, enregistrant une étonnante 60.000 enfants infectés chaque année⁶.

Trois articles dans la revue illustrent les efforts continus pour mettre en œuvre la PTME du VIH dans les différentes régions d'Afrique. L'article d'Iroezi et ses collègues⁷ présente des données actuelles qui illuminent les facteurs qui constituent des obstacles ou des facilitateurs pour les femmes qui reçoivent des soins dans un programme de PTME au Malawi, un pays actuellement met en œuvre une des politiques les plus progressistes en matière de la PTME en Afrique. Ce document présente une approche pour intensifier certaines des meilleures pratiques en matière de PTME, non seulement au Malawi, mais dans toute la région africaine. Il démontre ce qui peut être réalisé quand un pays déploie son arsenal de ressources pour lutter contre la maladie au sein de certaines populations les plus vulnérables. Un deuxième document par Imade et ses collègues⁸ de Jos, au Nigeria du Nord Central fournit des preuves pour expliquer la baisse des taux d'infection maternelle du VIH chez les femmes qui fréquentent les établissements de santé tertiaire pour l'accouchement. Une limitation importante de l'étude est la non-utilisation des données collationnées au niveau de la communauté. Dans un pays où 60 % des femmes accouchent en dehors de l'hôpital, on ne sait pas dans quelle mesure de telles données générées à l'hôpital peuvent être généralisées à l'ensemble de la population. Néanmoins, le fait que les taux étaient plus faibles dans le même hôpital par rapport aux années précédentes, peut suggérer une baisse du taux d'infection dans les accouchements qui ont lieu à l'hôpital.

Le troisième article sur la PTME est un article important qui décrit les progrès accomplis dans l'intensification de la prévention de la transmission de la mère à l'enfant dans les établissements de soins de santé primaires dans le nord-ouest du Nigeria. Le système de soins de santé primaires (SSP) est le point d'entrée dans les systèmes de soins de santé dans de nombreuses régions d'Afrique et constitue le type de soins qui est plus accessible et abordable pour certaines des populations les plus vulnérables du continent. Pourtant, il y a eu peu de tentatives pour intégrer la prestation de services du VIH dans ce niveau de soins. L'article d'Okusanya et ses collègues⁹ indique que les efforts pour la généralisation de la

PTME dans les soins de santé primaires sont réalisables. L'approche est recommandée à tous les gouvernements de l'Afrique subsaharienne comme un modèle pour la réalisation de la prestation de services de la PTME durable dans le continent.

La dernière série d'articles dans ce numéro de la revue peut être mieux décrit comme un mélange qui couvre des sujets les plus négligés dans la recherche sur le VIH et les innovations en Afrique. Ils varient d'un article qui décrit les problèmes méthodologiques et éthiques liés à la recherche et l'intervention sur le VIH en Afrique¹⁰ à un document qui examine la vieille question de savoir si la transmission du VIH est facilitée par la pratique culturelle de la mutilation génitale féminine¹¹. Les deux articles parlent du déficit de la recherche pour répondre à certaines des questions les plus urgentes et sans réponses relatives à la transmission du VIH dans le continent. Il y a également des articles qui portent sur les domaines encore non navigués comme la dysfonction sexuelle¹² et les troubles psychologiques¹³ qui peuvent être associés à l'expérience du VIH / SIDA.

En conclusion, ce numéro de RASR est une compilation de quelques-unes des questions les plus émergentes relatives à la prévention et aux soins du VIH / SIDA en Afrique subsaharienne. Rédigé par des avocats et des chercheurs en première ligne du changement social percutants, il fournit la preuve scientifique des efforts indigènes les plus attachants qu'on déploie pour intensifier la prévention du virus sur le continent. Les efforts visant à renforcer l'appropriation participative de lutte contre le VIH / sida et de tirer parti de l'engagement politique et le soutien pour intensifier les meilleures interventions seront les moyens les plus efficaces pour parvenir à une réduction durable de la prévalence du VIH / SIDA en Afrique subsaharienne dans un avenir prévisible.

Conflit d'intérêts

Aucun

Référence

1. Rapport de l'USAID sur l'épidémie mondiale: (<http://www.unaids.org/en/media/unaids/contentassets>

- /documents/epidemiology/2012/gr2012/21 Consulté le 26 octobre 2013.
2. Amo - Adjei J, Darteh EKM. Les conducteurs de l'attitude des jeunes envers la stigmatisation et la discrimination: les preuves du Ghana. *Afr J Reprod Health* 2013 (Edition Spéciale); 17[4]: 51-59).
 3. AmfAR recherche sur le sida. MSM, le VIH et la voie vers l'accès universel - A quel point sommes-nous arrivés ? Rapport spécial 2008. Consulté à : http://www.amfar.org/uploaded/In_the_Community. 29 octobre 2013.
 4. Adebajo SB, Eluwa GI, Tocco JU et al. Estimation du nombre des hommes prostitués à l'aide de la technique de capture-recapture au Nigeria. *Afr J Reprod Health* 2013 (Edition Spéciale); 17[4]: 83-89).
 5. Ayoola OO, Sekoni AO, Odeyemi KO. Rapport sexuel transactionnel, le préservatif et l'utilisation de lubrifiant chez les hommes qui ont des rapports sexuels avec des hommes dans l'Etat de Lagos, au Nigeria. *Afr J Reprod Health* 2013 (Edition Spéciale); 17[4]: 90-98).
 6. Comité national d'action sur le sida. 2013. Tendances nationales sur le VIH de 1991 à 2008. NACA, Abuja, au Nigeria.
 7. Iroezi ND, Mindry D, et al. Une analyse qualitative des obstacles et les facilitateurs à l'accès aux soins dans un programme de prévention de la transmission de la mère à l'enfant à Nkhoma, Malawi. *Afr J Reprod Health* 2013 (Edition Spéciale); 17[4]: 118-129).
 8. Imade GE, Sagay AS, Musa J, et al. La baisse des taux d'infection du VIH de la mère détectée à l'accouchement dans le centre-nord du Nigeria. *Afr J Reprod Health* 2013 (Edition Spéciale); 17[4]: 138-145).
 9. Okusanya BO, Ashimi AO, et al. Intensification de la prévention de la transmission du VIH de la mère à l'enfant aux services de santé primaire : témoignage de deux centres de santé primaire du nord-ouest du Nigeria. *Afr J Reprod Health* 2013 (Edition Spéciale); 17[4]: 130-137).
 10. Erinsho O Joseph R et al. Questions méthodologiques de la recherche en sciences sociales sur le VIH au Nigeria. *Afr J Reprod Health* 2013 (Edition Spéciale); 17[4]: 146-155).
 11. Olaniran AA. La relation entre les mutilations génitales féminines et la transmission du VIH en Afrique subsaharienne. *Afr J Reprod Health* 2013 (Edition Spéciale); 17[4]: 156-160).
 12. Lema VM. La dysfonction sexuelle chez les patients atteints du VIH. Trois rapports de cas et revue de la documentation. *Afr J Reprod Health* 2013 (Edition Spéciale); 17[4]: 161-170).
 13. Ofovwe CE, Ofovwe CE. Les troubles psychologiques chez les adultes atteints du virus d'immunodéficience humaine dans le sud du Nigeria. *Afr J Reprod Health* 2013 (Edition Spéciale); 17[4]: 177-182).

ORIGINAL RESEARCH ARTICLE

Improving Health Services for Adolescents Living with HIV in Sub-Saharan Africa: A Multi-Country Assessment

Edward D. Pettitt^{*1}, Rena C. Greifinger², B. Ryan Phelps³ and Sara J. Bowsky³

¹Academy for Educational Development (AED), Africa's Health in 2010 Project; ²Next Step; ³United States Agency for International Development (USAID)

*For correspondence: Email: edpettitt@gmail.com; Phone: +1- 716- 946- 6285

Abstract

In sub-Saharan Africa (SSA), the aging of HIV-positive pediatric cohorts and growing numbers of adolescents on treatment, coupled with high HIV incidence in this age group, means the number of adolescents living with HIV (ALHIV) will continue to grow. The clinical, psychological, social, and reproductive health needs of ALHIV remain poorly understood and efforts to mobilize and advocate for their treatment, care, and support have been inadequate. A multi-country assessment of the needs of ALHIV in SSA found that comprehensive, adolescent-friendly services that champion peer support and collaboration between health care organizations can foster successful transitions into adulthood for ALHIV. (*Afr J Reprod Health 2013 (Special Edition); 17[4]: 17-31*).

Keywords: adolescents, HIV/AIDS, reproductive health, youth friendly, peer support, sub-Saharan Africa

Résumé

En Afrique sub-saharienne (ASS), le vieillissement des cohortes pédiatriques du VIH-positives et le nombre croissant d'adolescents en traitement, y compris une incidence élevée du VIH dans ce groupe d'âge, signifie que le nombre d'adolescents vivant avec le VIH (AVVIH) va continuer à croître. Les besoins cliniques, psychologiques, sociaux et de santé de la reproduction chez des AVVIH restent mal compris et les efforts pour mobiliser et plaider pour leur traitement, leurs soins et leur soutien ont été insuffisants. Une évaluation à travers plusieurs pays des besoins des AVVIH en Afrique subsaharienne a révélé que des services complets et adaptés aux besoins des adolescents qui luttent en faveur du soutien par les pairs ainsi que la collaboration entre les organismes de soins de santé peuvent favoriser la réussite des transitions vers l'âge adulte pour les AVVIH. (*Afr J Reprod Health 2013 (Special Edition); 17[4]: 17-31*).

Mots-clés: adolescents, VIH/sida, santé de la reproduction, adapté aux besoins de la jeunesse, soutien par les pairs, Afrique subsaharienne

Introduction

Adolescents (age 10-19 years) born with HIV in sub-Saharan Africa (SSA) are now surviving into young adulthood for the first time and face a host of treatment, reproductive health and psychosocial challenges that the health sector is unprepared to manage¹⁻³. Of the estimated 2.1 million adolescents living with HIV (ALHIV) globally, 85% live in SSA^{4,5}. They face a large, unmet need for treatment and support, and many barriers to care⁶⁻⁸. Only 360,000 ALHIV globally, and 290,000 in SSA, receive anti-retroviral therapy (ART), representing a fraction of those who

currently need it⁹. Even in countries where ALHIV have free universal access to ART, there are hidden costs connected to treatment, including transportation to clinic and lab visits, and fees for certain tests, such as viral load tests¹⁰. Adolescents who were born with HIV are more likely to be in advanced stages of the illness, with a history of opportunistic infections, viral resistance, and comorbidities with other physical and mental health problems, making their treatment more complex than for those who contracted HIV during adolescence^{6,8,11}.

In addition to treatment, ALHIV face psychosocial and other challenges that further

African Journal of Reproductive Health December 2013 (Special Edition on HIV/AIDS); 17(4): 17

compound the already significant difficulties that accompany the transition to adulthood^{1,12-14}. These challenges impact adherence to medication and engagement in care over time¹⁵. Like most adolescents, ALHIV engage in high-risk behavior, putting their own and others' lives at risk¹⁶⁻¹⁸.

Keeping ALHIV alive and healthy, coupled with preventing new HIV infections, requires a unique service model and the will of policy makers, health care providers, community members and ALHIV to improve treatment, care and support for this population¹⁹. To date, pediatric HIV programs have primarily focused on diagnosing and treating illness in infants and young children, excluding adolescents and young people who are often the target for HIV prevention messages only, many of which are designed without a strong understanding of their developmental stage¹⁸⁻²². Little guidance has been produced on how to effectively provide services for ALHIV in SSA, and that which does exist lacks the perspectives of ALHIV and those who provide them with health care services. To prepare for the rapidly-increasing population of ALHIV, many of whom are transitioning into adulthood, such voices need to be captured^{1,4}.

With this in mind, the Africa Bureau of the United States Agency for International Development (USAID), through the Africa's Health in 2010 project, completed key informant interviews with health providers and ALHIV in SSA to better understand the needs of ALHIV so that services for this population might be improved. The methods, findings and recommendations from these key informant interviews are outlined below.

Methods

Two semi-structured interview guides were developed: one for key informants that work with ALHIV as project managers or service providers, and one for older young people (18-25 years old) that are living with HIV and also work/volunteer with ALHIV as peer educators. The project managers'/service providers' and peer educators' interview guides contained 48 and 53 open-ended questions, respectively (the latter had five additional questions on training/certification to be

a peer educator). Through a review of the literature, we identified nine key categorical constructs through which to explore the health care needs of ALHIV, and grouped the interview questions accordingly. The key constructs were: drug access and availability, clinical care, nutritional care, sexual and reproductive health, psychological support, social support, transition of care, resources and advocacy. Chain referral (a.k.a. 'snowball') sampling was utilized to identify appropriate key informants. Beginning with the 11-member USAID "Africa's Health in 2010 Adolescent HIV Technical Advisory Group" to seed the sampling process, additional informants were identified through referrals within social and professional networks. Interviews were conducted by three interviewers between February and April 2011. The primary interviewer, a consultant for the Africa's Health in 2010 project, was an American male who had worked with youth and HIV/AIDS programs in multiple countries in sub-Saharan Africa for over 5 years. The second interviewer was an American female who was serving as a volunteer for youth and HIV/AIDS organizations in Uganda and conducted both provider and peer educator interviews in Uganda and the third interviewer was a Canadian female who was working with a pediatric HIV clinic in Botswana and conducted two of the peer educator interviews in Botswana. Interviews were conducted both in person and telephonically. The interviews lasted between one and two hours each and were digitally recorded. Interviewers were carefully oriented to the standard interview guide, which was used in all interviews to ensure consistency. The primary interviewer, also the first author, provided periodic reviews of completed interview questionnaires to ensure quality. Written questionnaires were also accepted when in-person or phone interviews were not possible. Due to the unavailability of a budget to remunerate key informants, participants took part in the study voluntarily and were not compensated.

The interviews were transcribed to allow for thematic content analysis. First, the transcriptions were reviewed for accuracy. Second, the first and second authors coded the transcriptions in close detail (open coding), following a constructivist grounded theory approach²³. The team held a

conference call in order to compare notes and consolidate codes (selective coding) in order to generate key themes, which then informed key recommendations (Sidebar 1). Interview data was analyzed concurrently until thematic saturation of the provider interviews was reached, at which point no new interviews were conducted. Though it would have been preferable to conduct more peer educator interviews, most of the referrals for the peer educators (according to our snowball sample approach) came from providers, and most providers stated that either their organizations did not have peer educators, the peer educators were not over 18 (age required to be eligible for this study), or the peer educators were living in remote areas and did not have access to phones or internet to conduct the interviews.

Participants were assured that their names would not appear anywhere in the data sets, that their identities would be kept confidential, and that published reports may attribute direct quotes to their organizations but not to them individually. Names and other unique identifiers were stricken from the transcription during analysis. According to USAID guidance on human subjects, it was determined that human subjects review was not required to carry out this assessment because key informants were 18 years of age or older and no unique identifiers were used to link the informants with the information provided.

Informant Characteristics

A total of 34 interviews (26 program managers/service providers and 8 peer educators ages 18-25) were conducted with a gender breakdown of 16 females and 18 males representing 29 organizations and facilities. Program manager and service provider informants were from the following countries (with numbers of informants in parentheses): Botswana (2), Uganda (8), Tanzania (1), Mozambique (2), Malawi (1), Zimbabwe (1), Kenya (2), Rwanda (1), South Africa (7), and Swaziland (1). Their highest level of education attained included M.D. or equivalent (12), Ph.D. (1), Master's (8), and Bachelor's (5); and their length of time (in years) working with ALHIV ranged from 1 to 20 (mean = 7.4). Peer educator informants were from Uganda

(4) and Botswana (4), ranged in age from 18 to 25 (mean = 21); and their length of time (in years) working as a peer educator ranged from 3 to 6 (mean = 4.1). Twenty-five informants completed the interview in-person or by phone and 9 completed and returned the questionnaire in writing via email. For those informants who had accurate estimates of the ALHIV client population at their organization/facility (n=17), ALHIV enrollments ranged from 50 to 2,000 (mean = 595), 55% of whom were female, and 94% of whom were perinatally infected. Data and salient themes derived from the interviews are summarized below, by categorical construct.

Results

Drug Access and Availability

All of the key informants reported that first and second-line ART is available for ALHIV in their countries, though access remains a challenge. The most common formulations were reported to be twice-daily, though some informants said they provide once-daily regimens or fixed-dosed combinations for pediatric dosing. Third-line is mostly not used, though "salvage therapy"—a drug combination based on the first two lines—is sometimes offered in place of a new third-line regimen. ART is usually provided at no cost to the patient, as it is subsidized by national governments and international donor projects such as the President's Emergency Plan for AIDS Relief (PEPFAR). However, many of the organizations interviewed stated that drug shortages pose a major threat to drug access and availability for ALHIV, particularly in rural areas. One physician explained:

"It all boils down to the resources available to procure these drugs at a national level. I think that's the biggest factor. The other one is organizational, just making sure that orders are placed in time, are accurate, and that the supplies reach the health facilities in time."
(Pediatrician, HIV/AIDS treatment center, Uganda).

Those interviewed reported that pediatric dosing for ALHIV complicates treatment protocols. Due to their diminished weight and height, many ALHIV still require pediatric dosing, but health care workers, particularly in rural settings, are often not trained to manage such dosing. Drug access is also constrained by patient-level factors, with many clients lacking the money for transport, visitation fees, or other costs of attending clinic appointments.

Clinical Care

Informants reported that ALHIV face a number of challenges in clinical care that threaten their ability to attain optimal health. ALHIV often have complex medical histories and are prone to various acute HIV-associated medical disorders such as tuberculosis, lipodystrophy, nephropathy and certain neuropathies. Informants report that the long-term effects of antiretroviral medication exposure and multi-class drug experience - including implications for metabolism, growth and development - are still poorly understood. In addition, many aspects of the clinical care environment are seen to pose significant barriers to high-quality care for ALHIV, particularly providers with little ALHIV-specific training and services that are not adolescent-friendly.

Per informants, training on ALHIV-specific treatment and care is urgently needed for health care workers, including lay counselors and community health workers (CHWs). Though most lay counselors and CHWs do not prescribe treatment, many are vital in educating their patients on issues such as adherence to medication, mitigation of treatment side effects and disclosure of HIV status. Informants acknowledged the crucial role that these cadres play in an adolescent's support network. Limited training of these personnel can also have a negative impact. One health provider explained how lack of training leads to poor rapport between providers and their adolescent patients:

"We have had so many clinicians who don't have the right knowledge, the right skills, or the right techniques to handle adolescents. In most cases, they will just

prescribe the drugs and [the patient] leaves. This has been a big challenge because adolescents do not have a good relationship with our clinicians, despite the fact that they are treating them" (Manager, AIDS service organization, Uganda).

In order to address this gap, some institutions train all of their health care workers, regardless of whether they work in pediatrics or adult care, on how to provide optimal care for adolescents. In addition to the traditional staff of doctors, nurses and counselors, many facilities are also pushing for a greater involvement of ALHIV as expert patients and peer educators. In Botswana, some peer educators are being brought on as staff members:

"We have one peer educator, at least here at [our] main center, who is on salary—who is getting paid to provide peer counseling for adolescents. [She] is also one of our adolescents who was perinatally-infected. So we're really hoping that in the years to come, we can train more adolescents with HIV to be peer educators. We [also] have a lot of teen leaders, or adolescent leaders, who [assist] in finding out what adolescents living with HIV need and [serve as] advocates for their peers" (Pediatrician, HIV/AIDS treatment facility, Botswana).

Some organizations have gone a step further and are building the capacity of their peer educators to serve as advocates and ambassadors to a larger audience:

"Out of our peer leaders, we are developing an ambassador program, where children who show remarkable leadership skills are brought into a program where they are taught even more leadership, and are taught to become a voice for the rest of the children—share experiences, but bring to the rest of the country and the world the attention of all these thousands of children who have

overwhelming challenges, just trying to remain healthy and stay alive” (Country Director, AIDS service organization, Uganda).

One of the peer educators interviewed agreed with this approach:

“I think what really works is [fostering] professionalism in the lives of young people living with HIV... like putting them in places of leadership so that they can deliver. Those kids have a lot to offer” (Peer Educator, AIDS service organization, Uganda).

Alongside ALHIV involvement, informants emphasized that institutions should look toward creating clinical environments that are adolescent-friendly. They explained that many ALHIV no longer feel comfortable in a pediatric clinic, surrounded by children’s books and toys, but neither are they comfortable sitting in a waiting room alongside their elders. Many facilities interviewed have specific days for adolescent patients, or have certain areas or hospital wings where adolescents can go to wait for care:

“We did a need assessment to inform us about their [ALHIV] needs, being in a clinic where adults are and whether they needed their own clinic. They wanted their own clinic, because there were kids in the clinic with adults. They were blamed—why did they get infected at an early age? Others were sexually harassed by the adults in the clinic, trying to force them into relationships. Then there were the long waiting times. Others felt that they were sharing the same clinic with their uncles and aunties, and it affected their clinical attendance, because they felt uncomfortable coming and meeting their aunties and uncles here. So we set up a Young Adults Clinic on Wednesdays, separate from the Adult Clinic which runs the rest of the week” (Project Coordinator, HIV/AIDS treatment facility, Uganda).

Some institutions, however, find a family-based approach to be most effective in providing clinical care and support for ALHIV. An informant from Uganda explained how the family model has helped to foster communication and bonding between parents and their adolescent children:

“Because it’s a family model, we usually encourage the parents to come on the same day. So when I’m targeting this child, I’m also targeting the child with the parents. Originally, we used to provide the adults’ or the parents’ wing, but now what we basically do is if a service provider or a doctor is seeing one person and has a family, they see them as a whole. So you are basically targeting them as a family, and I think that has worked very, very well” (Head of Field Team, AIDS service organization, Uganda).

Informants also advocated for the utilization of creative and interactive models of health education that foster participatory learning, rather than the more traditional didactic approaches.

All of the informants noted that non-adherence to medication is a key challenge faced by ALHIV who receive ART. They noted that many adolescents keep HIV a secret, making it difficult to find the privacy to take medication on time or when in public places. For those whose HIV status is known, they risk discrimination from peers, teachers and other community members. A number of the peer educators interviewed discussed non-adherence as a direct impact of this type of discrimination. One physician discussed the facility- and provider-level challenges to supporting adolescents with adherence:

“Adherence is a huge challenge and overall not addressed in a comprehensive way with counseling or assistance. There is little understanding of the developmental stages of adolescence and that it is common for teens to struggle with adherence. There is not an understanding of the need to help teens to problem solve adherence challenges and for the most part it is often completely ignored as

clinics are very, very busy” (Physician, HIV/AIDS treatment center, Malawi).

When asked about recommendations for providing adherence support, informants praised programs that provide client-centered, one-to-one counseling within the clinic setting, as well as peer-led support. One informant noted the value of using peers to support adherence:

“I would like to suggest the best way to deal with adherence problems is to bring them peer support. First bring them peer support, and let them talk. Let them talk [about] their anger. Let them educate each other. Let them learn from one to the other” (Supervisor, AIDS service organization, Uganda).

Indeed, both provider and peer educator informants stressed that many ALHIV are more comfortable and open discussing issues of adherence, alongside other sensitive issues, with peers who can draw on their own experiences during counseling. An informant from Zimbabwe described the impact of training community adolescent treatment supporters (CATS) on the provision of counseling and adherence monitoring for ALHIV:

“Children and adolescents, supported by adults, take the lead in designing, implementing, monitoring and evaluating all of our programs and activities... [such as our] Community Adolescent Treatment Support (CATS) program...in which ALHIV have been trained as adherence counselors. They work in community clinics providing adherence counseling and also follow-up children and ALHIV at home to monitor pill boxes and adherence. We have found this to be an extremely powerful means of supporting adherence. ALHIV often report challenges more readily to their peers than to adults. The CATS then refer these cases to the outreach team and clinic who follow-up. This has also provided the adolescents with invaluable opportunities for training and work experience and several have

now progressed onto nursing training” (Director, AIDS Service Organization, Zimbabwe).

Health providers also acknowledged that adolescents who have been able to disclose their HIV status to a supportive person in their lives demonstrate an increased likelihood to adhere to their medications than those who have not disclosed. Therefore, they suggest implementing counseling programs that support ALHIV with disclosure to trusted adults and peers.

Nutritional Care

While the nutritional needs of ALHIV are similar to those of other adolescents, health providers noted that ALHIV have an increased caloric requirement due to their chronic illness. Respondents noted that, since many ALHIV are orphaned and/or living in poverty, they are also more prone to malnutrition. With informants report that taking medication on an empty stomach can greatly affect adherence and many ALHIV may stop taking their medications completely when they do not have enough food to eat. One physician in Mozambique highlighted the importance of proper nutrition for ALHIV:

“Adolescence is a time [of] higher metabolic needs and increased nutrition. Adding a chronic disease to that stage of life increases the body’s nutritional needs even more. Sadly, in most of our settings in Mozambique, poverty is so pervasive that there is rarely enough food to meet these increased needs. Chronic malnutrition is a pervasive problem in Mozambique with 40% of children having short stature” (Pediatrician, HIV/AIDS treatment center, Mozambique).

Many programs have tried to curb these challenges by providing porridge or full meals during clinic appointments, and maize and soya flour for ALHIV to take home. For qualifying ALHIV who are malnourished, some clinics provide Plumpy Nut (a high-protein, high-energy, peanut-based paste) in the form of Ready to Use Therapeutic Feeding Packets (RUTF). A few

organizations are able to provide full meals for very impoverished children, particularly those who head their own households. Given that inadequate resources often limit feeding of all patients, many programs provide complementary services like immunizations against vaccine-preventable diseases, vitamin supplementation, dietician consultation, nutrition education and income generating activities that can help adolescents to access food.

Sexual and Reproductive Health (SRH)

Informants reported that while many of the sexual and reproductive health needs of ALHIV are similar to those of other adolescents, certain areas are of particular concern for this population. These include the added stress and complexity inherent in romantic and sexual relationships with known HIV infection as well as issues surrounding disclosure, including fear of rejection, stigma and blame. One physician broke down the SRH needs of ALHIV as follows:

“[ALHIV have] four unique [concerns]: there is the risk of transmitting the disease to their partner; the stigma and trust issues related to disclosing to their partner; the pressures of society for boys to have many girlfriends and for girls to prove their fertility; and most of our patients are physically stunted and enter puberty late. Another [concern] is that many of the ALHIV are orphans and do not have a good family unit to learn about or discuss these issues” (Pediatrician, AIDS service organization, Swaziland).

Few of our informants, however, were able to identify efforts related to the training of healthcare providers in the areas of sexual and reproductive health counseling. An informant from Uganda described the lack of SRH training throughout many levels of health discipline in the country:

“I’ve gone through a diploma course. I hardly had anything that had to do with sexual and reproductive health. I went through undergraduate. I didn’t handle anything like that. Now I’m doing the Master’s; still I don’t see something like

African Journal of Reproductive Health December 2013 (Special Edition on HIV/AIDS); 17(4): 23

that. So you can imagine I am going to be a psychologist who doesn’t have any knowledge about sexual and reproductive health. You can only get this information in [special] courses or go to the Internet and search for information and then prepare yourself. But how many people are able to go to the Internet and search about sexual and reproductive health for adolescents? Very few” (Supervisor, AIDS service organization, Uganda).

Peer educators commented that health providers often dissociate sex and relationships, concentrating only on whether an adolescent is having sex rather than also providing support with relationships. Peer educators also noted that many health providers do not view ALHIV as sexual beings, incorrectly assuming that ALHIV do not have sex because of their HIV status. One peer educator spoke about the desires of ALHIV to have children:

“Kids want to know if it’s possible for them to have babies while HIV-positive. And kids want to know if they can have sex without a condom if they are both HIV-positive” (Peer Educator, HIV/AIDS treatment facility, Botswana).

Informants agreed that major improvements are needed in health care worker training, guidance and policy reform surrounding SRH in order to adequately support ALHIV as they transition to adulthood. This includes the development of health care environments that are non-judgmental and safe for ALHIV to access comprehensive reproductive health education, and free or affordable contraceptive and family planning services. Health care workers need to be specifically trained in sexual health education, and this training needs to be consistent and continuous, rather than offered once, so that health care workers remain up-to-date with promising practices in providing SRH care and services.

Psychological Support

Peer educators noted that ALHIV commonly feel anger, both at themselves and at their parents.

They suffer from self-stigma and self-blame, and perceive that they lack the opportunities available to uninfected peers. Many ALHIV live in denial about their HIV status and the ramifications thereof and this denial can lead to harmful behaviors such as poor medication adherence or unsafe sex. Many ALHIV, say peer educators, live with little or no hope for the future:

“I have reached a point in life where I think I understand my needs and [those of] other children who are in my position. I feel that the only challenge I have yet to face is of [what to say] when kids tell me that they feel they don’t want to live anymore. They will tell you, “Hey, I don’t feel like I should be living anymore, because I already know it (HIV) is going to kill me” (Peer Educator, HIV/AIDS treatment facility, Botswana).

One health provider spoke in-depth about the effects that HIV stigma and discrimination have on the mental health of ALHIV:

“They are mistreated. They are ignored. They are beaten every day, stigmatized by their community. That is how they develop mental illness. Some of them are not really born with such ailments but because of what they go through, they eventually end up developing such problems” (Counselor, AIDS service organization, Uganda).

Many of the informants’ organizations have counselors or social workers on staff, but they range widely in their qualifications and training. Many are not qualified to manage emotional trauma in HIV-positive patients. Others are not trained to deal with issues concerning sex and sexuality. Very few, especially those based in rural settings, are trained to work specifically with adolescents. Clinical psychologists or psychiatrists that can accurately diagnose psychiatric disorders and prescribe medication are almost non-existent. One health care provider in South Africa described the situation as follows:

“If you speak to anybody in South Africa, you’ll discover that the plans are wonderful but the resources, basically human resources, are very scarce. And people keep hinting that they’re going to start training clinical nurses, but it doesn’t really materialize. And counseling has been subcontracted to NGOs who allegedly train counselors but in fact only give them about 30 days of training. And they come to us and they really can’t cope with the sort of load that you would expect a psychosocial counselor to be able to handle” (Pediatrician, government health agency, South Africa).

One peer educator mentioned that it is also helpful for ALHIV to be mentored by HIV-positive adults since they can relate to the challenges ALHIV are facing and can serve as role models:

“We [sometimes] have an HIV-positive adult come and [talk about] the challenges [we face], because she is older than us. She has been through most of what we are going through right now, and she is helping us—[showing us] how to overcome challenges. I think bringing in people who have been through [similar] experiences or challenges that we are going through does help” (Peer Educator, HIV/AIDS treatment facility, Botswana).

Our interviews indicated that peer support groups for ALHIV are common though the mission, structure and activities of such groups vary widely. Topics for support group discussions often include adherence to medication, disclosure, sex and sexuality, relationships, managing stigma, and building life-skills. Peer support is viewed as a powerful mechanism and a key component of a holistic package of services for ALHIV. One of the most structured and widespread support groups mentioned by informants is the network of “Teen Clubs” operated through the Baylor International Pediatric AIDS Initiative. With sites in Botswana, Uganda, Malawi, Swaziland, Lesotho and Tanzania, it is described as the largest global network of peer support groups for ALHIV and

was cited as a promising practice by multiple informants:

“The mission of Teen Club is to empower HIV-positive adolescents to live positively and successfully transition into adulthood. We offer emotional and educational support through structured activities designed to teach life skills, foster relationships, and build confidence. We provide a forum for adolescents to constructively express themselves and discuss issues regarding their condition without the threat of stigma” (Pediatrician, HIV/AIDS treatment center, Swaziland).

Informants said that ALHIV would potentially benefit from drop-in centers that offer care and support in addition to programs that integrate ALHIV from many different agencies and institutions within a regional setting. This would allow them to share their experiences more broadly and create a wider community of ALHIV for support and guidance. Overall, informants decried a lack of cross-program and cross-country collaboration to improve care and support for ALHIV:

“There are a few people doing wonderful things. We don’t meet enough so you’re left to feel like you’re the only ones that are taking [care and support for ALHIV] as a focus and you’re constantly hit with resistance around the issue. So more collaboration would be great.... and coming together with best practice models, because many of us have tried and failed at a bunch of things and we keep reinventing the wheel” (Head of Counseling and Prevention, HIV/AIDS treatment facility, South Africa).

Social Support

According to informants, outside of psychological counseling, most forms of social support are severely limited for ALHIV. This includes basic needs like housing, food, transportation and school fees. One informant described the socio-economic situation of ALHIV in South Africa as follows:

African Journal of Reproductive Health December 2013 (Special Edition on HIV/AIDS); 17(4): 25

“The majority of ALHIV in South Africa come from very poor socio-economic backgrounds. They may have been living with grandparents in rural areas where conditions are very poor. ALHIV in our service are often living in very cramped informal accommodation with very little money or access to food and transport. The death of family members may remove the only income from the home, increasing the financial difficulties” (Principal Medical Officer, government health agency, South Africa).

Some hospitals and clinics are able to subsidize adolescents’ travel to and from services. Those organizations that are able to provide transportation assistance for their patients report substantial improvement in retention in care. Other agencies have programs that support the very needy with school fees, but the majority of ALHIV who are not attending school do not have access to such funds. Some organizations provide vocational training programs in areas such as hairdressing, mechanics and hotel management, as well as some capital so that ALHIV can start small businesses; however, this is rare. Some provide scholastic materials (e.g. books, pens, pencils) and toiletries (e.g. soap, deodorant, sanitary towels) in addition to bedding and mattresses for those ALHIV who are in boarding school and cannot afford them. At times, university fees and equipment for starting a business are available.

In order to provide better social support services for ALHIV, providers suggest holding inter-agency networking meetings within regional settings so that non-governmental organizations and relevant ministries can promote a better understanding of what each is doing and forge stronger referral networks. It is also recommended that agencies place stronger emphasis on economic empowerment through development of livelihood skills and facilitation of income generation activities, so that ALHIV can learn how to support themselves.

Transition of Care

Few organizations have a clear strategy in place to transition their ALHIV from pediatric to adult