SOME PUBLICATIONS FROM RWANDA FROM AUG 2010 TO JAN 2011

Compiled by Dr. Gilles F. Ndayisaba

HIGH HIV RISK BEHAVIOR AMONG MEN WHO HAVE SEX WITH MEN IN KIGALI, RWANDA: MAKING THE CASE FOR SUPPORTIVE PREVENTION POLICY

Chapman,J.; Koleros,A.; Delmont,Y.; Pegurri,E.; Gahire,R.; Binagwaho,A.

AIDS Care. 2011 Jan 24:1-7.

Abstract

Rwanda has responded strongly to HIV/AIDS, but prevention among men who have sex with men (MSM) has not yet been addressed due to a strong cultural resistance to homosexuality, and a lack of data showing the public health value of attending to the sexual health needs of this group. We conducted an exploratory study on HIV risk among MSM in Kigali using snowball sampling involving peer leaders. The 99 respondents were demographically, socially, and sexually diverse. Respondents reported relatively high numbers of male and female partners, and considerable HIV risk behaviors including commercial sex with men and women, low condom use during anal and vaginal sex, and high mobility. Many respondents reported verbal and/or physical abuse due to their sexuality. This first study of MSM in Rwanda has brought attention to a previously neglected HIV risk group and their potential driving role in the Rwandan epidemic, demonstrating the need for sensitive and targeted interventions

UNDERSTANDING LOCALLY, CULTURALLY, AND CONTEXTUALLY RELEVANT MENTAL HEALTH PROBLEMS AMONG RWANDAN CHILDREN AND ADOLESCENTS AFFECTED BY HIV/AIDS

Betancourt TS, Rubin-Smith JE, Beardslee WR, Stulac SN, Fayida I, Safren S

AIDS Care. 2011 Jan 24:1-12

Abstract

In assessing the mental health of HIV/AIDS-affected children and adolescents in Sub-Saharan Africa, researchers often employ mental health measures developed in other settings. However, measures derived from standard Western psychiatric criteria are frequently based on conceptual models of illness or terminology that may or may not be an appropriate for diverse populations. Understanding local perceptions of mental health problems can aid in the selection or creation of appropriate measures. This study used qualitative methodologies (Free Listing, Key Informant interviews, and Clinician Interviews) to understand local perceptions of mental health problems facing HIV/AIDS-affected youth in Rwinkwavu, Rwanda. Several syndrome terms were identified by participants: agahinda kenshi, kwiheba, guhangayika, ihahamuka, umushiha, and uburara. While these local syndromes share some similarities with Western mood, anxiety, and conduct disorders, they also contain important culture-specific features and gradations of severity. Our findings underscore the importance of understanding local manifestations of mental health syndromes when conducting mental health assessments and when planning interventions for HIV/AIDS-affected children and adolescents in diverse settings

MAMA AND PAPA NOTHING': LIVING WITH INFERTILITY AMONG AN URBAN POPULATION IN KIGALI, RWANDA

Dhont N, van de Wijgert J, Coene G, Gasarabwe A, Temmerman M.

Hum Reprod. 2011 Mar;26(3):623-9. Epub 2011 Jan 7

Abstract

BACKGROUND Not being able to procreate has severe social and economic repercussions in resource-poor countries. The purpose of this research was to explore the consequences of female and/or male factor infertility for men and women in Rwanda.

METHODS Both quantitative and qualitative methods were used. Couples presenting with female and/or male factor infertility problems at the infertility clinic of the Kigali University Teaching Hospital (n= 312), and fertile controls who recently delivered (n= 312), were surveyed about domestic violence, current and past relationships and sexual functioning. In addition, five focus group discussions were held with a subsample of survey participants, who were either patients diagnosed with female- or male-factor fertility or their partners.

RESULTS Domestic violence, union dissolutions and sexual dysfunction were reported more frequently in the survey by infertile than fertile couples. The psycho-social consequences suffered by infertile couples in Rwanda are severe and similar to those reported in other resource-poor countries. Although women carry the largest burden of suffering, the negative repercussions of infertility for men, especially at the level of the community, are considerable. Whether the infertility was caused by a female factor or male factor was an important determinant for the type of psycho-social consequences suffered.

CONCLUSIONS In Rwanda, as in other resource-poor countries, infertility causes severe suffering. There is an urgent need to recognize infertility as a serious reproductive health problem and to put infertility care on the public health agenda

HIGH HUMAN IMMUNODEFICIENCY VIRUS-FREE SURVIVAL OF INFANTS BORN TO HUMAN IMMUNODEFICIENCY VIRUS-POSITIVE MOTHERS IN AN INTEGRATED PROGRAM TO DECREASE CHILD MORTALITY IN RURAL RWANDA

Franke MF, Stulac SN, Rugira IH, Rich ML, Bucyibaruta JB, Drobac PC, Iyamungu G, Bryant CM, Binagwaho A, Farmer PE, Mukherjee JS.

Pediatr Infect Dis J. 2011 Jan 4

Abstract

We retrospectively examined infant mortality and human immunodeficiency virus (HIV)-free survival among 211 infants who received a comprehensive package of health services, including breast milk substitution and clean water access, to prevent maternal-to-child transmission of HIV and improve child survival. The cumulative 12-month infant survival probability was 0.97 (95% confidence interval: 0.94-0.99). The cumulative 12- to 18-month HIV-free survival probability was 0.95 (confidence interval: 0.91-0.97)

EXAMINATION OF MATERNAL GINGIVAL CREVICULAR FLUID FOR THE PRESENCE OF SELECTED PERIODONTOPATHOGENS IMPLICATED IN THE PRE-TERM DELIVERY OF LOW BIRTHWEIGHT INFANTS
Africa CW, Kayitenkore J, Bayingana C
Virulence. 2010 Jul-Aug;1(4):254-9.

Abstract

BACKGROUND: Reports show that more than 20 million infants world-wide are born prematurely with 95% of all pre-term births occurring in developing countries. Oral colonization of gram-negative anaerobes has been implicated as a risk factor for preterm delivery of low birth weight infants.
MATERIALS AND METHODS: This study comprised 200 women admitted to the department of obstetrics and gynecology of the teaching hospital of Butare in Rwanda. Gingival crevicular fluid was collected from each quadrant of the mother's mouth (using paper points) within 24 hours of delivery. A dichotomous score of presence or absence of gingival inflammation was recorded for each patient along with demographic data such as age, marital status etc. Samples were examined by PCR for the presence of Aggregatibacter actinomycetemcomitans and selected members of the red and orange complexes described by Socransky et al., (1998), and their presence associated with age, gingival inflammation and pregnancy outcomes.
RESULTS: Association of bacterial species with the risk of periodontal disease and thus the risk of preterm delivery was only observed when they occurred in pairs or groups of three or more. Aa appeared to be a necessary co-factor for significant associations of bacterial groups with the variables recorded.

DEVELOPING HUMAN RIGHTS-BASED STRATEGIES TO IMPROVE HEALTH AMONG FEMALE SEX WORKERS IN RWANDA
Binagwaho A, Agbonyitor M, Mwananawe A, Mugwaneza P, Irwin A, Karema C.
Health Hum Rights. 2010 Dec 15;12(2):89-100.

Abstract

How governments should address sex work is a topic of current debate in Rwanda and other countries. Some constituencies propose harsher punishment of sex workers as the cornerstone of an improved policy. We argue that an adequate policy response to sex work in the Rwandan context must prioritize public health and reflect current knowledge of the social determinants of health. This does not imply intensified repression, but a comprehensive agenda of medical and social support to improve sex workers' access to health care, reduce their social isolation, and expand their economic options. Evidence from social epidemiology converges with rights-based arguments in this approach. Recent field interviews with current and former sex workers strengthen the case, while highlighting the need for further social scientific and epidemiological analysis of sex work in Rwanda. Rwanda has implemented some measures that reflect a rights-based perspective in addressing sex work. For example, recent policies seek to expand access to education for girls and support sex workers in the transition to alternative livelihoods. These policies reinforce the model of solidarity-based public health action for which Rwanda has been recognized. Whether such measures can maintain traction in the face of economic austerity and ideological resistance remains to be seen.

COMPARING TWO SERVICE DELIVERY MODELS FOR THE PREVENTION OF MOTHER-TO-CHILD TRANSMISSION (PMTCT) OF HIV DURING TRANSITION FROM SINGLE-DOSE NEVIRAPINE TO MULTI-DRUG ANTIRETROVIRAL REGIMENS
Tsague L, Tsiouris FO, Carter RJ, Mugisha V, Tene G, Nyankesha E, Koblavi-Deme S, Mugwaneza P, Kayirangwa E, Sahabo R, Abrams EJ.
BMC Public Health. 2010 Dec 6;10:753.

Abstract

BACKGROUND: Mother-to-child transmission (MTCT) of HIV has been eliminated from the developed world with the introduction of multi-drug antiretroviral (md-ARV) regimens for the prevention of MTCT (PMTCT); but remains the major cause of HIV infection among sub-Saharan African children. This study compares two service delivery models of PMTCT interventions and documents the lessons learned and the challenges encountered during the transition from single-dose nevirapine (sd-nvp) to md-ARV regimens in a resource-limited setting.
METHODS: Program data collected from 32 clinical sites was used to describe trends and compare the performance (uptake of HIV testing, CD4 screening and ARV regimens initiated during pregnancy) of sites providing PMTCT as a stand-alone service (stand-alone site) versus sites providing PMTCT as well as antiretroviral therapy (ART) (full package site). CD4 cell count screening, enrollment

into ART services and the initiation of md-ARV regimens during pregnancy, including dual (zidovudine [AZT] +sd-nvp) prophylaxis and highly active antiretroviral therapy (HAART) were analysed.
RESULTS: From July 2006 to December 2008, 1,622 pregnant women tested HIV positive (HIV+) during antenatal care (ANC). CD4 cell count screening during pregnancy increased from 60% to 70%, and the initiation of md-ARV regimens increased from 35.5% to 97% during this period. In 2008, women attending ANC at full package sites were 30% more likely to undergo CD4 cell count assessment during pregnancy than women attending stand-alone sites (relative risk (RR) = 1.3; 95% confidence interval (CI): 1.1-1.4). Enrollment of HIV+ pregnant women in ART services was almost twice as likely at full package sites than at stand-alone sites (RR = 1.9; 95% CI: 1.5-2.3). However, no significant differences were detected between the two models of care in providing md-ARV (RR = 0.9; 95% CI: 0.9-1.0).
CONCLUSIONS: All sites successfully transitioned from sd-nvp to md-ARV regimens for PMTCT. Full package sites offer the most efficient model for providing immunological assessment and enrollment into care and treatment of HIV+ pregnant women. Strengthening the capacity of stand-alone PMTCT sites to achieve the same objectives is paramount.

WHEN ONE CAN INFECT TWO: A REFLECTION ON THE IMPACT OF HIV DISCORDANCE ON CHILD HIV INFECTION

Binagwaho A, Ratnayake N, Mukherjee J, Mugabo J, Karita E, Pegurri E
Pan Afr Med J. 2010 May 10;5:10.

Abstract

This is an opinion piece based on data and experience from Rwanda. The authors believe this opinion piece may help improve current programs on prevention of HIV transmission from mother to child in Africa taking into account the prevalence of HIV sero-discordance in couples. The authors recommend that if we want to ensure newborns stay HIV negative, PMTCT protocols should offer a series of HIV tests linked with antenatal visits and the lactation period as well as HIV testing of current sexual partners. Moreover, if the male partner is found to be positive and the woman is negative, programs should provide intensive counseling on the use of condoms. The lives of three individuals have the potential to be changed from HIV testing and counseling. Morally, this cannot be ignored.

RELIABILITY OF ANTHROPOMETRIC MEASUREMENTS PERFORMED BY COMMUNITY NUTRITION WORKERS IN A COMMUNITY-BASED PEDIATRIC GROWTH-MONITORING PROGRAM IN RURAL RWANDA

Ngirabega JD, Hakizimana C, Wendy L, Munyanshongore C, Donnen P, Dramaix-Wilmet M.
Rev Epidemiol Sante Publique. 2010 Dec;58(6):409-14. Epub 2010 Nov 19. French.

Abstract

BACKGROUND: In Rwanda, the community-based growth-monitoring program is implemented via volunteer community nutrition workers. These volunteers are recruited from within their communities, and receive basic training prior to providing services. Utilizing local volunteers improves access to basic nutrition services, and allows the local health jurisdictions to use qualified health care staff more efficiently. In addition to concerns raised in regards to the accountability of unpaid workers, some question the relevance of the data that is collected. We carried out a nutritional survey in the catchment area of Ruli District Hospital to evaluate the reliability of the community nutrition workers' measurements of anthropometric standards collected within the growth-monitoring framework.
METHODS: A nutritional survey was recently organized in the catchment area of the hospital in December 2006. The prevalence rates of malnutrition from the survey were compared with those from the existing community-based growth-monitoring program. Z-test was used to compare the prevalence rate of underweight from the survey with the prevalence rate determined by data collected from community nutrition workers. The concordance of children classified with moderate and severe underweight in each data set was determined by the coefficient Kappa of Cohen.
RESULTS: Our findings show that the recent survey reported an overall underweight prevalence rate of 27.2%. Community data calculated a prevalence rate of 28.8% for the same population. The difference is not statistically significant (P=0.294). Of 724 children evaluated, the survey and the community were in agreement in regards to 454 children classified in the category of good nutritional status, 143 children classified in moderate underweight and 11 children classified in the severe underweight category. The Kappa of Cohen coefficient of 0.636 indicates strong concordance between data sets.
CONCLUSION: Anthropometric measurements provided by the community are reliable. Information gathered from the community can be used for epidemiologic monitoring of malnutrition. To ensure continued reliability, health centers must provide sufficient and permanent training to community nutrition workers. In addition, continued access to essential materials used for measuring nutritional status and maintenance of these materials will be crucial to the program's ongoing success.

MUTUAL HEALTH INSURANCE IN RWANDA: EVIDENCE ON ACCESS TO CARE AND FINANCIAL RISK PROTECTION

Saksena P, Antunes AF, Xu K, Musango L, Carrin G.

Health Policy. 2011 Mar;99(3):203-9. Epub 2010 Oct 20.

Abstract

OBJECTIVE: Rwanda has expanded mutual health insurance considerably in recent years, which has a great potential for making health services more accessible. In this paper, we examine the effect of mutual health insurance (MHI) on utilization of health services and financial risk protection. METHODS: We used data from a nationally representative survey from 2005-2006. We analysed this data through summary statistics as well as regression models. FINDINGS: Our statistical modelling shows that MHI coverage is associated with significantly increased utilization of health services. Indeed, individuals in households that had MHI coverage used health services twice as much when they were ill as those in households that had no insurance coverage. Additionally, MHI is also associated with a higher degree of financial risk protection and the incidence of catastrophic health expenditure was almost four times less than in households with no coverage. Nonetheless, the limitations of the MHI coverage also become apparent. CONCLUSION: These promising results indicate that MHI has had a strong positive impact on access to health care and can continue to improve health of Rwandans even more if its limitations are addressed further.

WEIGHT LOSS AFTER THE FIRST YEAR OF STAVUDINE-CONTAINING ANTIRETROVIRAL THERAPY AND ITS ASSOCIATION WITH LIPOATROPHY, VIROLOGICAL FAILURE, ADHERENCE AND CD4 COUNTS AT PRIMARY HEALTH CARE LEVEL IN KIGALI, RWANDA

van Griensven J, Zachariah R, Mugabo J, Reid T.
Trans R Soc Trop Med Hyg. 2010 Dec;104(12):751-7.

Abstract

This study was conducted among 609 adults on stavudine-based antiretroviral treatment (ART) for at least one year at health center level in Kigali, Rwanda to (a) determine the proportion who manifest weight loss after one year of ART (b) examine the association between such weight loss and a number of variables, namely: lipoatrophy, virological failure, adherence and on-treatment CD4 count and (c) assess the validity and predictive values of weight loss to identify patients with lipoatrophy. Weight loss after the first year of ART was seen in 62% of all patients (median weight loss 3.1 kg/year). In multivariate analysis, weight loss was significantly associated with treatment-limiting lipoatrophy (adjusted effect/kg/year -2.0 kg, 95% confidence interval -0.6;-3.4 kg; P<0.01). No significant association was found with virological failure or adherence. Higher on-treatment CD4 cell counts were protective against weight loss. Weight loss that was persistent, progressive and/or chronic was predictive of lipoatrophy, with a sensitivity and specificity of 72% and 77%, and positive and negative predictive values of 30% and 95%. In low-income countries, measuring weight is a routine clinical procedure that could be used to filter out individuals with lipoatrophy on stavudine-based ART, after alternative causes of weight loss have been ruled out.

HIV INFECTION AND SEXUAL BEHAVIOUR IN PRIMARY AND SECONDARY INFERTILE RELATIONSHIPS: A CASE--CONTROL STUDY IN KIGALI, RWANDA

Dhont N, Muvunyi C, Luchters S, Vyankandondera J, De Naeyer L, Temmerman M, Wijgert J.
Sex Transm Infect. 2011 Feb;87(1):28-34. Epub 2010 Sep 18.

Abstract

OBJECTIVE: To compare the prevalence of sexually transmitted infections (STIs) (including HIV) and of high-risk sexual behaviour in the following three groups: primary infertile relationships, secondary infertile relationships and fertile relationships. Primary infertility is here defined as never having conceived before, secondary infertility as infertility subsequent to having conceived at least once.
DESIGN: Unmatched case--control study.
METHODS: Sexually active infertile women aged 21-45 years presenting at an infertility clinic of the Kigali Teaching Hospital, Rwanda and their male partners were invited to participate. Fertile controls who had recently delivered were recruited from the community. In a face-to-face interview, participants were asked about sociodemographic characteristics and their sexual behaviours, and tested for HIV and STIs.
RESULTS: Between November 2007 and May 2009, 312 women and 254 partners in infertile relationships and 312 women and 189 partners in fertile relationships were enrolled. Involvement in a secondary infertile relationship was associated with HIV infection after adjusting for sociodemographic covariates for women (adjusted OR (AOR) = 4.03, 95% CI 2.4 to 6.7) and for men (AOR = 3.3, 95% CI 1.8 to 6.4). Involvement in a primary infertile relationship, however, was not. Secondary infertile women were more likely to have engaged in risky sexual behaviour during their lifetime compared with primary infertile and fertile women. Men in primary and secondary infertile relationships more often reported multiple partners in the past year (AOR = 5.4, 95% CI 2.2 to 12.7; AOR = 7.1, 95% CI 3.2 to 15.8, respectively).
CONCLUSIONS: Increased HIV prevalence and risky sexual behaviour among infertile couples is driven by secondary infertility. Infertile couples, and especially those with secondary infertility, should be targeted for HIV prevention programmes and their fertility problems should be addressed.

TRAINING SOFTWARE DEVELOPERS FOR

ELECTRONIC MEDICAL RECORDS IN RWANDA

Seymour RP, Tang A, DeRiggi J, Munyaburanga C, Cuckovitch R, Nyirishema P, Fraser HS.

Stud Health Technol Inform. 2010;160(Pt 1):585-9.

Abstract

In many developing countries, electronic medical record (EMR) systems are being implemented in resource-poor settings. Essential to such implementations are software developers with a high technical capacity, a good understanding of medical informatics and an awareness of local clinical needs. This paper describes a training program which has been run in Rwanda to enable local computer science graduates to play a significant role in that country's forthcoming implementation of a national EMR system. Such a training program is unique in that region of Africa and we discuss the challenges inherent in such an undertaking. We describe the development of the curriculum and the evolution of the teaching methodologies over the course of the year and discuss its potential integration with academic institutions in Rwanda. Finally we propose that training programs of this nature which produce local software developers who are familiar with medical informatics are a requirement for successful and sustainable eHealth implementations in the developing world.

USING ELECTRONIC MEDICAL RECORDS FOR HIV CARE IN RURAL RWANDA

Amoroso CL, Akimana B, Wise B, Fraser HS.

Stud Health Technol Inform. 2010;160(Pt 1):337-41.

Abstract

Partners In Health (PIH) implemented an electronic medical record (EMR) system in Rwanda in 2005 to support and improve HIV and TB patient care. The system holds detailed patient records, accessible to clinicians through printed reports or directly via a computer in the consultation rooms. Ongoing assessment of data quality and clinical data use has led multiple interventions to be put in place. One such evaluation cycle led to the implementation of a system which identified 15 previously undiagnosed pediatric patients with HIV. Another cycle led to an EMR intervention which helped to decrease the proportion of completed critical CD4 lab results that did not reach clinicians by 34.2% (p=.002). Additionally an automated data quality improvement system reduced known errors by 92% by providing local data officers a tool and training to allow them to easily access and correct data errors. Electronic systems can be used to support care in rural resource-poor settings, and frequent assessment of data quality and clinical use of data can be used to support that goal.

ACHIEVING LARGE ENDS WITH LIMITED MEANS: GRAND STRATEGY INGLOBAL HEALTH

Leslie A. Curry, Minh A. Luong , Harlan M. Krumholz, John Gaddis, Paul Kennedy, Stephen Rulisa, Lauren Taylor, Elizabeth H. Bradley

Abstract

Unprecedented attention is focused on global health, with a four-fold increase in development assistance in the last 15 years and the scope of global health expanding beyond infectious disease to include chronic disease and health systems strengthening. As the global impact of health is more widely understood, it has become a crucial element of international relations, economic development, and foreign affairs. At this potential leverage point in the global health movement, the application of grand strategy is of critical importance. Grand strategy, i.e., the development and implementation of comprehensive plans of action to achieve large ends with limited means, has been refined through centuries of international relations and the management of states but has been inadequately applied to global health policy and implementation. We review key principles of grand strategy and demonstrate their applicability to a central global health issue: maternal mortality. The principles include: start with the end in mind, take an ecological approach, recognize that tactics matter, use positive deviance to characterize practical solutions and foster scale-up, and integrate timely intelligence and data into health interventions and improvement efforts. We advocate for the greater use of grand strategy in global health.