



INTERNATIONAL CENTRE FOR REPRODUCTIVE HEALTH



ACTIVITY REPORT 2013

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The International Centre for Reproductive Health

The International Centre for Reproductive Health (ICRH) is a multidisciplinary research institute within Ghent University. The Centre was established in 1994 in response to the International Conference on Population and Development (ICPD, Cairo, 1994).

ICRH conducts research and intervention projects in all areas of reproductive health and is active in Africa, Latin America, Asia and Europe.

ICRH is a WHO Collaborating Centre for Research on Sexual and Reproductive Health and has experience in attracting donor funds from a wide range of agencies.

ICRH conducts fundamental, epidemiological, social, clinical, health systems as well as policy research. Main topics are contraception, maternal and newborn health, sexual and gender-based violence, and Sexually Transmitted Infections (STI). Special attention is paid to key populations such as adolescents and sex workers.

Besides research, the Centre is also active in:

- Training and capacity building: academic programmes (such as Masters and PhDs), courses and workshops but also on-site training, monitoring, evaluation and supervision to strengthen local capacity
- Reproductive health services: advice, consultancies, technical assistance, policy support, designing, planning, implementing, monitoring and evaluation
- Advocacy: awareness raising at all levels (including the scientific and the political), and keeping sexual and reproductive health and rights on the policy agenda.

Preface

For ICRH, 2013 was a year of restructuring and strategy development. In addition to the usual research, training and service delivery work, quite some time was spent on elaborating and fine-tuning the main axes along which we will structure our activities in the coming years, and –linked to that- on regrouping the activity clusters. The headlines of this strategy work are presented further on in this report, but at least as important as the results, is the process that has led to these results. For each of the core topics of ICRH, priorities were defined based on identified research gaps, available expertise and previous experience and projects. The successive drafts were discussed in several rounds and involved the vast majority of the staff. This work of reflection and discussion is not yet finished, and in fact it will never be: ICRH wants to be a research institute that continuously reflects on which research questions in global sexual and reproductive health and rights are the most urgent and most important to be dealt with, which approach may be used for this, and what the role of ICRH and its partners in this can be.

The new strategy will not only guide us in focusing our research and other activities, it will allow us to pursue project funding in a more pro-active way. ICRH resources stem largely from competitive grant acquisition, meaning that we typically subscribe to calls for proposals in our fields of interest. We have been quite successful in this so far, and this way of working has brought us many very exciting projects and interesting scientific findings. However, in the future we will, more than in the past, seek funding independently from public calls for proposals, with project ideas that are derived from our strategic priorities and our own insights in what is most needed and innovative. By doing so, we want to shift our role from following the agenda to participating more in setting the agenda.

In 1994 it will be 20 years ago when our ‘founding mother’ prof. Marleen Temmerman has established ICRH, and we won’t let this 20th anniversary go by unnoticed. On 4 and 5 December we will organize a two-day international conference, featuring several symposia with presenters and panels on our key topics, and followed by a celebration on which we hope to see as many as possible of our partners and friends, and of everyone who contributed to the exciting adventure that ICRH has been in the past 20 years, and that - we hope - it will continue to be in many years to come.

Olivier Degomme,
Scientific Director.

Dirk Van Braeckel,
Director of Finance and Administration.

ICRH Strategy 2014 - 2020

In 2013, ICRH undertook a strategic exercise to redefine its priorities for the coming years. This resulted in a strategy document that sets out the lines for our functioning for the period 2014-2020.

Based on previous experience and projects, available expertise, and on identified research gaps, ICRH has defined thematic research priorities for 2014-2020. While this does not mean that we will not do research on other topics related to sexual and reproductive health, it does entail that we will be actively working on advancing scientific knowledge in the proposed fields. We have identified three programmatic areas around themes, and two around key populations.

The research priorities for 2014-2020 are presented in the form of three broad themes.

The first area relates to **contraception, maternal and newborn health**. In previous years, ICRH has done a number of research projects on maternal and newborn care, infertility and post-abortion care. In the coming years, we will focus on addressing the unmet need for family planning, quality and access to care, and psychosocial health and pregnancy. We will also invest in studying the link between population and development, with a focus on environment and sustainable development.

Secondly, we will continue to place a strong emphasis on **sexual and gender-based violence**. This includes contributing to improving the health and well-being of those who are vulnerable for violence by reducing their vulnerability through prevention, intervention and care. Furthermore, our work on harmful cultural practices will be continued. In this perspective, we will focus on female genital mutilation, early/forced marriages and honor-related violence.

A third programmatic area is **Sexually Transmitted Infections**. The main focus will be STI prevention, contributing to a reduction in the incidence of STIs. We will have particular attention for HIV preventive research, including modeling and effective prevention interventions, and for the implementation and follow-up of the HPV vaccine.

For the coming years, we identified two target groups, around which a specific programmatic area is developed: adolescents and young people, and sex workers.

Adolescents and young people are a critical group to address in sexual and reproductive health research. Nearly two thirds of premature deaths and one third of the total adult disease burden is associated with conditions or behaviors that began in youth, including unsafe sexual behavior. There are vulnerable to HIV/STI infection and consequences of reproductive health issues are often greater in young girls. We plan to develop research programs around teenage pregnancies, gender norms in adolescence and health promotion and sexuality education.

Sex workers world-wide are vulnerable to a range of factors that dispose them to poor health outcomes. In particular, they are at high risk of violence, injury, rape, discrimination and a spectrum of human rights abuses. Their vulnerability to unwanted pregnancies, HIV and other STIs are many fold greater than the non-sex worker population of the same age. Health care systems world-wide, and particularly in sub-Saharan Africa, are not adequately responsive to the needs of sex workers. As a result, many sex workers do not receive adequate sexual and reproductive health services, education or HIV prevention tools.

While the literature on female sex work in Africa is fairly robust, troubling research gaps are evident on access to health care, male and transgender sex work, and the intersections of migration and sex work.

This division into 'programmatic areas' also entails an internal restructuring of ICRH. As from 2014, staff and projects will be linked to one or more programmatic areas.



Activities 2013

1. Sexually transmitted infections

1.1 RESEARCH PROJECTS

1.1.1 Assessment by molecular methods of the healthy and disturbed vaginal microbiota of South African women

Financed by:	NRF-FWO	
Coordinator:	ICRH Belgium	
Partners:		
ICRH Belgium		Belgium
WRHI (formerly RHRU)		South-Africa
Budget:		420,000 EUR
Start date:		1 October 2010
End date:		30 September 2013
Contact person at ICRH:		Rita Verhelst Rita.Verhelst@UGent.be

The aim of this project is to transfer skills to assess alterations in the vaginal microbiome to the Wits Reproductive Health and HIV Institute (WRHI) in Johannesburg, South Africa.

The vaginal econiche is associated with a stable, characteristic microbiota that is adapted to optimally use all the available nutrients and assure a given functional stability. Minor changes occur in time and the microbiota tends to move from one state of stable community to the next one. These fluctuations may occur in the dominant species but also in the less abundant species, which play a key role in functional resilience.

In 2013, we studied the importance and contribution of rare species (minority species) of the microbiota.

1.1.2 Characterisation of novel microbicide safety biomarkers in East and South Africa (BIOMARKERS)

Financed by:	EDCTP	
Coordinator:	ICRH Kenya	
Partners:		
ICRH Kenya		Kenya

WRHI (formerly RHRU)	South-Africa
Projet Ubuzima	Rwanda
MITU/NIMR	Tanzania
ITM	Belgium
AIGHD (formerly AMC-CPCD)	Netherlands
ICRH	Belgium
Ghent University	Belgium
LSHTM	UK
MRC-CTU	UK
Budget:	2,688,595 EUR
Start date:	5 April 2009
End date:	4 January 2013
Contact person at ICRH:	Rita Verhelst Rita.Verhelst@UGent.be

Vaginal microbicides are being developed to expand HIV prevention options for women and couples. A healthy vaginal environment protects women from infections and should therefore remain intact during and after product administration. Up to recently, microbicide safety trials included naked-eye pelvic exams and colposcopy to visualize genital epithelial disruption and inflammation and vaginal fluid microscopy to evaluate the vaginal microbiota. However, negative phase III trial results with candidate microbicides suggested that these tests are insufficient to predict harm. Since then, some research groups have started to include biomarkers of the vaginal microbiome, genital inflammation and epithelial integrity, and have started to enumerate HIV target cells, in human safety trials. However, up to date, normative value ranges of these biomarkers have not yet been established in population groups that are relevant for microbicide trials, and many additional potential biomarkers have not yet been evaluated. The present Microbicides Safety Biomarker study was designed to fill this gap in knowledge and focuses on characterizing the vaginal environment with emerging laboratory techniques to determine baseline values in different population groups.

The aim of the 'Microbicide Safety Biomarkers' project was to establish baseline ranges of vaginal microbiome, immunology, and epithelial integrity biomarkers in groups of women targeted for microbicide trials in Kenya, Rwanda, and South Africa.

In Kenya, Rwanda and South Africa, we characterized the vaginal environment in 430 women at seven time points over eight months, and in Tanzania, we characterized the vaginal environment in 100 women at 12 time points over 28 days.

Recruitment and retention procedures for adolescent and pregnant women, both populations that are not typically included in standard safety and efficacy trials but are likely to participate in bridging trials of efficacious products, were evaluated in Johannesburg and Mombasa. Adolescents proved to be the hardest to reach population and retention was low due to high mobility. Pregnant women were easily recruited through antenatal clinics and retention and acceptability of study procedures were high.

Throughout the study, skills and technology transfer was a core activity not only for the laboratories but also for the data management and study monitoring teams. For example, PCR technology for identification and genotyping of human papillomavirus and for quantification vaginal bacteria, as well as culture of anaerobic bacteria, were successfully transferred to local laboratories.

This project had a strong focus on capacity building and networking. Next to the laboratory trainings and trainings on clinical assessments, an active data management and monitoring training agenda was set up with a focus on south-south training. Five master students were offered a biostatistics course. Furthermore, two staff members obtained a bachelor degree, 6 staff members obtained a master degree and one PhD student was trained in immunology. During the project, two consortium meetings were held in Mombasa and Johannesburg, respectively.

1.1.3 Age-disparity, sexual connectedness and HIV infection in disadvantaged communities around Cape Town, South Africa

Financed by:	Research Foundation Flanders (FWO), Belgium VLIR-UOS, Belgium	
Coordinator:	ICRH Belgium	
Partners:		
SACEMA		South Africa
Hasselt University		Belgium
Budget:	500,000 EUR	
Start date:	1 January 2010	
End date:	31 December 2014	
Contact person at ICRH:	Wim Delva Wim.Delva@ugent.be	

In 2011-2012, researchers from ICRH-Belgium, in collaboration with SACEMA, completed the data collection phase of this sexual behavior surveillance project, which aims to get more detailed insights into the role of the sexual network structure in the spread and control of HIV in South Africa. Crucial connections between sexual network structure and the spread of HIV remain inadequately understood, especially as regards the role of multiple, concurrent and age-disparate relationships, and how these features correlate with each other and other risk factors.

In 2013, two papers were published, reporting the results of statistical analyses of this cross-sectional survey (n=878) in three urban disadvantaged communities in the greater Cape Town area to study associations between HIV status, sexual connectedness and age-disparity. The survey documented in detail the one-year sexual histories of respondents. The questionnaire was administered in a safe and confidential mobile interview space, using Audio Computer-Assisted Self-Interview (ACASI) technology on touch screen computers. All study communities participated in a previous TB/HIV surveillance study, from which HIV test results were anonymously linked to the survey dataset.

The first paper made the case that, thanks to our innovative approach to the administration of the survey, we were able to minimize social-desirability bias and elicit more valid responses to sensitive questions about respondents' sexual histories. The second paper scrutinized evidence in support of the coital dilution hypothesis. Under this hypothesis, the per-partnership frequency of sex acts decreases when people move from being in a monogamous relationship to being in multiple, concurrent relationships.

Our analysis did not find evidence for this hypothesis, nor for increased condom use during episodes of concurrency.

Lastly, a third analysis was conducted into key aspects of relationship dynamics among the study population. Specifically, we estimated the point prevalence and cumulative prevalence of engagement in concurrent relationships, and applied competing risks models to determine sub-hazard ratios (SHR) of entering a concurrent relationship, with individual and relationship characteristics as covariates. The model accounted for the possibility that a monogamous relationship may terminate, or become censored before the outcome of interest (start of a concurrent relationship) was observed. This analysis considered sexually active participants (n=519) only, who jointly reported on 807 relationships. The point prevalence of concurrency six months before the survey was 11.8%: 15.3% and 10.1% for men and women, respectively. The one-year cumulative prevalence of concurrency was 25.6%, with median duration of overlap being 9 weeks (IQR: 2-27). Of the concurrent relationships 60% (n=132) overlapped for more than a month. During the one-year window, 451 relationships were at risk of becoming concurrent. Women were less likely than men to enter into a concurrent relationship (SHR 0.36; 95% CI: 0.21-0.60). Relationships with main partners were more likely to become concurrent, than casual relationships (SHR 3.93; 95%CI: 1.79-8.61). Our analysis suggests that in this population the prevalence of concurrency is relatively high and is characterized by overlaps of long duration. This implies that there are many opportunities for HIV to be transmitted to concurrent partners. This may be especially true of men and those in main partnerships since they are more inclined to acquire a concurrent partner. Further research is needed to assess if duration of overlap is correlated with HIV in an individual's concurrent partner.

1.1.4 Surveillance of HPV infections and HPV related disease subsequent to the introduction of HPV vaccination in Belgium (SEHIB)

Financed by:	SPMSD	
Coordinator:	ICRH Belgium	
Partners:		
Belgian University Hospitals		Belgium
Labo Riatol		Belgium
Institute for Public Health		Belgium
Budget:	1,007,555 EUR	
Start date:	December 2009	
End date:	March 2014	
Contact person at ICRH:	Davy Vanden Broeck Davy.vandenbroeck@ugent.be	

The introduction of the HPV vaccine could lead to a change in the distribution of HPV types in the population. The vaccine includes the types 16 and 18 which are causing the majority of all cervical cancers (app. 70%). There is a possibility that these could be replaced by other types which are also carcinogenic and which are currently not covered by the vaccine. Therefore monitoring and surveillance of the HPV type distribution after the introduction of the vaccine is necessary. In addition, cross-

protection (protection against disease associated with types other than the vaccine types but related to them) will result in a protection of the vaccinated population that is greater than expected. Detailed surveillance can help to disentangle these possible effects. The current study is in line with the request of the European Medicines Agency (EMA) to investigate the HPV type-specific prevalence and the potential non-vaccine type replacement in the post-vaccine era in non-Nordic EU member states.

This population-based, cross-sectional study has a duration of 4 years. Study samples are collected from women between 18 and 64 years of age, attending cervical cancer screening in 5 university and 4 periphery centres. The main objectives of the study are to assess the HPV vaccination status in the study population, to estimate the crude and age-standardized prevalence of HPV infection and of cytological cervical lesions in both the vaccinated and the general study population and to study the correlation between HPV vaccination status and cytological and histological findings. Furthermore, the detection rate of cytology for histological confirmed lesions, the correlation between HPV type infection and cytological and histological findings and the impact of HPV vaccination on the correlation of HPV infection and cytology/histology are being studied.

SEHIB has entered its final phase at the end of 2013. The collection of samples is almost completed, with 6000 routine samples and 600 abnormal samples. The data will be analysed and the results published in 2014.

1.1.5 HPV/BV interaction

Financed by:	FWO
Coordinator:	ICRH Belgium
Partners:	
ICRH Kenya	Kenya
Budget:	234,000 EUR
Start date:	October 2008
End date:	September 2014
Contact person at ICRH:	Davy Vanden Broeck Davy.vandenbroeck@ugent.be

Bacterial vaginosis (BV) has been described to be an important cofactor in acquisition of several STIs. Alterations of the vaginal microbiota are more frequently found in an African population, and this could also contribute to the higher prevalence of STIs and related disease in Sub-Saharan Africa. Regarding HPV and related cervical cancer, the relationship BV/HPV remains less clear, with contradicting scientific evidence, and even lacking evidence for the African continent.

This research aims to investigate the relationship of HPV and BV, focusing on African women. Via meta-analysis, potential associations on existing data will be investigated. Furthermore, a nested cross-sectional study will enroll women with BV and confirm HPV infection in this population (Mombasa, Kenya). These samples are subjected to state-of-the-art laboratory techniques, to unravel potential underlying cell biological reasons. In cervico-vaginal samples, obtained from women with and without HPV infection, differentially expressed proteins will be detected and their functionality investigated.

Preliminary results show indeed a positive correlation between BV and HPV and BV and cervical lesions. Data on African women are being collected and laboratory methods have been prepared. Samples have been analysed and results can be published.

1.1.6 Cervical cancer prevention in Kenya: Introduction of the HPV vaccines

Financed by:	Fund for Scientific Research Flanders, FWO
Coordinator:	ICRH Belgium
Partners:	
Moi University	Kenya
ICRH Kenya	Kenya
Budget:	
	180,000 EUR
Start date:	1 October 2010
End date:	30 September 2014
Contact person at ICRH:	Heleen Vermandere Heleen.vermandere@ugent.be

In Kenya, HPV vaccination is not part of the national immunization scheme. The 2 types of HPV-vaccines are however approved and allowed to use in the country. Dr Hillary Mabeya, National Advisor on Adolescent Vaccination at the Ministry of Health (Kenya), received a grant of 9600 HPV vaccines from the GARDASIL Access Program in order to pilot HPV vaccination. The pilot program started in May 2012 and ended in March 2013. Primary school girls (standard 4 to 9, i.e. approximately 9 to 14 years of age) enrolled in 10 randomly selected public schools were the first target group, but in a second phase the program was opened for young girls from the whole community. While vaccination occurred at Moi University Hospital, promotion of the HPV-vaccine was school based: health providers informed the teachers who on their turn had to inform the girls and mothers about upcoming vaccination opportunities.

Through interviewing mothers of eligible girls before and after the vaccination program, we study and evaluate the introduction of the HPV vaccines in Kenya. The objectives are:

- To measure the acceptability, intention and behavior towards HPV vaccination in Kenya;
- To define the impact of referents' opinions, and the impact of personal, socio-cultural and structural factors on the decision regarding HPV vaccination of young girls;
- To assess the willingness-to-pay for HPV vaccines;
- To generate achievable recommendations on how to design, implement and promote HPV vaccination in Kenya.

After collecting the baseline data in 2012, ethical approval for the follow-up survey was obtained from Ghent University and Moi University in March-April 2013. Translation of the study documents was done by the research team in cooperation with the interviewers. All team members received capacitation regarding cervical cancer prevention and interviews techniques were practiced. In April-May 2013, participants were re-invited by phone and 89.2% (256/287) agreed to be interviewed again. In addition, a

qualitative component was implemented in order to obtain perspectives from key stakeholders of the past HPV vaccination program. More specific, focus group discussions were organized with fathers (3), teachers (4) and nurses (1).

While acceptance was very high (88.1%) at baseline, only 31% had eventually vaccinated their daughter, and 51% reported that they had wanted to vaccinate but had missed the opportunity. Preliminary results show that among this latter group, 55% had not received information regarding the whereabouts of the program. Among those who had actively decided not to vaccinate (17%), 42% mentioned fear of side effects as barrier while 31% said the partner opposed to vaccinating the daughter against cervical cancer. More in-depth analysis will shed light on the entire decision-making process of HPV-vaccination in the context of this demonstration project in Kenya.



1.1.7 Vertical transmission of HPV

Financed by:	Ghent University	
Coordinator:	ICRH Belgium	
Partners:		
Free University of Brussels (VUB)		Belgium
Budget:	-	
Start date:	01/10/2010	
End date:	30/09/2015	
Contact person at ICRH:	Davy Vanden Broeck Davy.vandenbroeck@ugent.be	

HPV is a very common, sexually transmitted virus; the lifetime incidence is estimated to be as high as 80% (Einstein, 2009). Until recently, it was generally assumed that HPV infection and related diseases in children were due to sexual abuse. This paradigm, however, has been changed over the past decade. Children with no history of sexual abuse can equally suffer from HPV related diseases, the latter presumably including: skin and anogenital warts, oral papillomas and recurrent respiratory papillomatosis. Data on HPV infection in children, including newborns, is slowly becoming available. The extent to which HPV and HPV related diseases in minors can be found, remains however ambiguous. Prevalence rates of HPV infections ranging from 0% up to 70% have been described in the recent literature. Factors contributing to this extremely large range potentially include technical limitations; some studies were conducted when optimal HPV detection (PCR based) was not readily available and probably resulted in false negative outcomes.

Towards infection of a child, the route of effective infection with HPV remains still unclear. Suggested is that infection can occur in a vertical manner, i.e. in utero and during birth, but also an important contribution of horizontal transmission, e.g. during nursing or breastfeeding cannot be excluded. The existence of new and better techniques will now make it possible to find clear answers regarding mother-to-child-transmission (MTCT) of HPV and its prevalence.

The objectives of the study are to determine HPV type specific prevalence in different sample sites, including amniotic fluid, vaginal swab, placenta and breast milk, and to elucidate MTCT of HPV during pregnancy, delivery and breastfeeding.

The study on amniotic fluid has been completed, including laboratory analyses. The prevalence in amniotic fluid was found to be rather low, and there seemed to be no correlation with vaginal HPV infections. The sub study on breast milk is currently ongoing. Samples are being collected, it is foreseen that by mid-2014 all samples will be collected. Also the placental part of the study was initiated. Hereto, collaboration was sought with the TWINS study.

1.1.8 Evolution of human papillomavirus infection in pregnant women infected with human immunodeficiency virus

Financed by:	-
Coordinator:	ICRH Belgium
Partners:	
ICRH Kenya	Kenya
Budget:	20,000 EUR
Start date:	01/02/2011
End date:	31/01/2013
Contact person at ICRH:	Davy Vanden Broeck Davy.vandenbroeck@ugent.be



Human papillomavirus (HPV) infection is the main etiological factor for cervical cancer, the second most common cancer in women worldwide. In immune compromised women, such as human immunodeficiency virus (HIV) infected patients, HPV infection displays a different natural history with a faster disease progression, more and higher grade disease, and with less efficient response to treatment. Furthermore, pregnant women have been proven to be at higher risk to develop HPV related cervical lesions. In addition, the effect of HAART on HPV infection is still a matter of debate. The combination of both immune suppression, different regimens of HAART, and pregnancy is largely unknown, hence the topic of this research proposal.

The overall objective of this study is to gain insight in HPV co-infection in HIV positive pregnant women.

Specific objectives include the determination of the prevalence of type-specific HPV infections in HIV positive women during pregnancy and at 3 months postpartum, and the assessment of the influence of different

HAART regimens on clearance of HPV infection and of the relationship between CD4 cell count and genotype specific HPV infection. A total of 250 participants from the Kesho Bora Mombasa study site who had 2 cervicovaginal samples taken; one during pregnancy and one at three months postpartum were selected for HPV genotyping. The sample is a convenience sample from a large multi-country, multi-centre interventional study.

HPV genotyping was performed at the International Centre for Reproductive Health laboratory in Kenya. A first publication was prepared in 2013 and will be presented in 2014. Further publications are being prepared.

1.2 OTHER ACTIVITIES

1.2.1 Belgian HIV/AIDS working group

The HIV team is an active member of the Belgian HIV/AIDS working group. The working group wants to mobilize the different Belgian actors working in the field of HIV/AIDS in order to contribute to the implementation of an AIDS policy that reduces the impact of HIV/AIDS worldwide. The working group does this by exchanging knowledge, information and experiences in the field of HIV/AIDS and by means of advocacy. In 2013 ICRH continued to take part in the working group.

Contact persons at ICRH: Kristien Michielsens and Yves Lafort.

1.2.2 BREACH

ICRH is member of the Belgian AIDS and HIV Research Consortium (BREACH). This consortium unites all Belgian AIDS Reference Laboratories (ARLs) and AIDS Reference Centres (ARCs), as well as other organizations that play a significant role in AIDS-related research or prevention, such as ICRH and Sensoa. BREACH aims among others at setting up a Belgian AIDS cohort, that will centralize all data on HIV/AIDS in Belgium and make them available for research purposes.

Contact person at ICRH: Kristien Michielsens.

1.2.3. Flemish STI meeting (Vlaams soa-overleg)

ICRH is a member of the Flemish STI meeting. This is a forum of professional people with and expertise in and interest for STIs, that meets twice a year. The objective is to informally inform each other on evolutions in the field. Participants are family physicians, clinical biologists, gynaecologists, urologists, epidemiologists, prevention workers, collaborators of AIDS reference labs, and researchers. Sensoa fulfils the role of the secretariat of the group.

Contact person at ICRH: Kristien Michielsens, Rita Verhelst

1.2.4 ICRH-UZ Ghent HPV platform

The launch of an HPV research platform has provided researchers from Ghent University and the University Hospital a forum to discuss and harmonize their research activities in the field of cervical cancer/HPV research. Next to colleagues from Ghent, also partners from Antwerp University and the national Institute for Public health join the meetings. The main goal of the platform is to streamline existing research efforts and to launch new projects.

Contact person at ICRH: Davy Vanden Broeck, Heleen Vermandere

1.2.5 VLIR-Moi IUC collaboration

Within a long-lasting collaboration between VLIR-UOS and the Moi University (Eldoret, Kenya), an important section is dedicated to reproductive health and focuses on HPV research. Not only will Heleen Vermandere do her PhD research within this setting, also a Kenyan PhD student will investigate the impact of cervical cancer at the social level. In 2013, the collaboration was setup and in total 3 PhD Projects [continued](#).

Contact person at ICRH: Davy Vanden Broeck, Heleen Vermandere

1.2.6 Capacity building HPV genotyping ICRHK

In order to perform HPV genotyping for the various on-going projects in Kenya, ICRH Kenya staff has been trained to perform HPV genotyping assays. This capacity will allow efficient sample analysis on the ground and this capacity has been nationwide recognized. Indeed, other researchers have requested ICRHK service to facilitate sample analysis. Future planning includes introduction of an in-house pre-screening, prior to HPV genotyping.

Contact person at ICRH: Rita Verhelst, Davy Vanden Broeck

2. Interpersonal Violence

2.1 RESEARCH PROJECTS

2.1.1 Mapping the multi-sectorial support for survivors of sexual violence in South Kivu Province, DR Congo

Financed by:	VLIR-UOS
Coordinator:	ICRH Belgium
Partners:	
Université Catholique de Bukavu	Democratic Republic of Congo
Budget:	200,000 EUR
Start date:	September 2010
En date:	September 2012
Contact person at ICRH:	Steven Callens, steven.callens@ugent.be

The fight against sexual violence is a priority for the government of the DRC in the process of rebuilding the country and in the fight against poverty. The overall objective of this academic project is to strengthen the Catholic University of Bukavu as a leader in the fight against sexual violence. The overall development objective is to increase the quality of care for women survivors of sexual violence. The direct beneficiaries of the project are researchers from the Faculties of Medicine, Law and Economics, as well as researchers at the local NGO 'Vision d'Espoir'. The indirect beneficiaries are the agents involved in national and international programs to support women survivors of sexual violence. The main project activities are: building capacity in research methodologies, training in English, in depth analysis of a database on sexual violence of UNFPA and the development of a mapping of stakeholders in the territory Walungu and Bukavu.

This study was completed in 2013 and the results will be published shortly.

2.1.2 Training of hospital-based health professionals in caring for women with FGM – Phase II

Financed by:	Belgian Federal Agency Public Health
Coordinator:	Groupe pour l'Abolition des Mutilations Sexuelles
Partners:	
ICRH Belgium	
Budget	7,050 EUR

Start date:	10 October 2013
End date:	30 June 2014
Contact person at ICRH:	Els Leye els.leye@ugent.be

The training aims at limiting the psychological and social impact of FGM on the health of women through an adequate care for women and girls with FGM. More specifically, this project aims at enhancing the theoretical knowledge of care providers on FGM and to build their capacities in caring for women with FGM. The training program is specifically targeted at midwives and gynecologists at maternities in 10 hospitals in the provinces of West-Vlaanderen (AZ Groeninghe Kortrijk, Yperman Hospital Ieper), Oost-Vlaanderen (AZ Sint Lucas Gent, AZ Jan Palfijn, AZ Sint Nikolaas Sint Niklaas), Limburg (Sint Trudo Sint Truiden, Sint Fransiskus Heusden Zolder, Maria Ziekenhuis Overpelt), and Vlaams Brabant (UZ Leuven, Heilig Hart Tienen).

Els Leye and Dr Vercoetere started the trainings late 2013, with a two hours session in each of the above mentioned hospitals and will continue in 2014. They will equally assist in the two-day training for reference midwives, that will be organized in 2014.

2.1.3 Girls and Women forced into marriage: understanding the impact of migration on Moroccan communities

Financed by:	VLIR-UOS (Vlaamse Interuniversitaire Raad - University Development Cooperation)	
Coordinator:	ICRH Belgium	
Partners:		
Université Mohammed V		Rabat, Morocco
Association El Amane pour le développement de la Femme		Marrakech, Morocco
Start date:	1 October 2009	
End date:	30 September 2013	
Contact person at ICRH:	Alexia Sabbe alexia.sabbe@ugent.be	

The project studies the impact of context on the occurrence of forced marriage in Morocco, and among Moroccan immigrants in Belgium. In general, the project explores to what extent migration has an influence on perceptions and decision-making processes of forced marriage. More specifically, it examines to what degree the cultural and religious perceptions have been transferred in migratory circumstances. In addition, the impact of different context, policies, law enforcement, etc. is investigated. Overall, an in-depth understanding of the phenomenon of forced marriage will provide policy makers and program managers with factual support and background knowledge for potential interventions.

In 2013, the results from the field research in Morocco were analyzed and written up together with the local partner 'Association El Amane pour le Développement de la Femme'. The article '*Determinants of child and forced marriage in Morocco: stakeholder perspectives on health, policies and human rights*', which was published in October 2013, presents the results of the in-depth stakeholder interviews.

The Belgian research activities, in the framework of the 'Managers of Diversity' program, continued in 2013. Focus Group Discussions and individual in-depth interviews were organized. Group discussions using the Intergenerational Dialogue method were held, as well as intercultural group discussions. The research results were analyzed and are being written up.

2.1.4 Registration of FGM in hospitals

Financed by:	Belgian Federal Agency for Public Health	
Coordinator:	ICRH Belgium	
Partners:		
University Medical Centre Saint Pierre, Brussels		Belgium
Budget:	44,891 EUR	
Start date:	1 February 2012	
End date:	31 December 2013	
Contact person at ICRH:	Els Leye Els.leye@ugent.be	

Although the current medical registration system used in Belgian hospitals contains all necessary components to adequately register cases of FGM seen during hospitalizations and at day-clinics, there is evidence that points to a serious underreporting. In addition, the current system does not provide any way to register specific information on the types of surgical repairs done in the context of FGM. This project aims therefore at evaluating the existing procedures for hospitalizations and day-clinics in order to assess whether a more accurate use of the existing registration procedures will lead to a higher registration. The study was implemented in ten Belgian hospitals. The project report was submitted to the Federal Agency for Public Health and follow-up will be discussed in 2014.

2.1.5 BIDENS-study, a six country study on life-events & fear of mode of delivery, part II.

Financed by:	EU DAPHNE program		
Coordinator:	NTNU, Norwegian University of Science and Technology Faculty of Medicine		
Partners:			
ICRH Belgium		Belgium	
University Hospital, Department of		Iceland	

Obstetrics and Gynaecology	
National Hospital, Copenhagen, Juliana Marie Center, Ultrasound	Denmark
Karolinska University Hospital	Sweden
Tartu University Clinicum Department of Obstetrics and Gynaecology	Estonia
Budget:	205,029 EUR
Start date:	2007
End date:	2012
Contact person at ICRH:	An-Sofie Van Parys ansofie.vanparys@ugent.be

The hypothesis of this multi-country study is that women who experienced violence during their lifetime, will develop more fear of childbirth and therefore have more instrumental (C-sections and/or vacuum and/or forceps) deliveries. This study managed to gather data for more than 7000 women over the six countries. In Belgium, 864 women were included.

In 2009 the study received additional funding for two years to continue the analysis of the collected data and to continue the national and international dissemination of the results. The main results of the study are currently being published in two papers, one on the abuse prevalence and one on the correlation between a history of abuse and operative delivery. Project funding expired in 2012, but publication of the data will continue at least until the end of 2014.

2.1.6 Partner violence and pregnancy, an intervention study within perinatal care (MOM-study)

Financed by:	Research Foundation Flanders (FWO), Belgium
Coordinator:	ICRH Belgium
Partners:	
University Hospital Ghent, Dpt. Of Ob/Gyn, AZ Groeninge Kortrijk, AZ Jan Palfijn Gent, AZ St Jan Brugge, OLV ziekenhuis Aalst, OLV van Lourdes zieken huis Waregem, UZA, Virga Jesse ziekenhuis Hasselt, ZNA Middelheim Antwerpen, ZOL Genk	Belgium
Budget:	180,000 EUR
Start date:	1 October 2009
End date:	30 September 2014
Contact person at ICRH:	An-Sofie Van Parys ansofie.vanparys@ugent.be

The aim of this research project is twofold: firstly a large-scale prevalence/incidence study on intimate partner violence during pregnancy and secondly an intervention study to address violence during pregnancy.

By means of a written questionnaire, the prevalence/ incidence study measures physical, psychological and sexual partner violence in a pregnant population and explores the correlation with psychosocial health. Moreover, this doctoral study wants to determine if there are effective and safe methods to improve help-seeking behaviour and safety behaviour, and to reduce partner violence and hence some negative consequences for mother and child. Therefore, 223 pregnant women who reported partner violence are selected (based on the questionnaire) and interviewed in the second part of the study. We will test if, when we identify partner violence during pregnancy and refer women to local resources, the prevalence/incidence of partner violence is reduced, women adopt more safety behavior, seek more help and/or the negative effects of partner violence are reduced.



STUDIE:

We weten dat gevoelens een invloed hebben op de zwangerschap. Dit onderzoek van de Universiteit Gent heeft als doel beter te begrijpen hoe jouw gevoelens de zwangerschap beïnvloeden en hierdoor de zorgverlening te verbeteren.

WAT VRAGEN WE?

1. Eén **vragenlijst** invullen op 2 momenten tijdens de zwangerschap.
[totale duur: 10 min.]
2. Indien je geselecteerd wordt en je bereid bent om mee te werken, 2 telefonische **interviews**.
[totale duur: ± 1 uur]



CONTACTPERSOON:

An-Sofie Van Parys
Tel: 09/332.53.72 [rechtstreeks nummer]
Email: ansofie.vanparys@ugent.be

In 2012, the recruitment for the first part of the study (questionnaire) was finalized. We managed to gather data for 1894 women spread over 12 hospitals. Until now 223 women were randomized into the second part of the study, 183 women were interviewed a first time and 78 a second time.

The data of the first part of the study is analyzed and two papers are currently being written. One paper focuses on the prevalence and patterns of violence before and during pregnancy and another paper explores the correlation of IPV with psychosocial health and satisfaction with antenatal care. The data from the interviews is processed and exploratory analysis is being done.

2.1.7 REPLACE 2: Researching FGM Intervention Programs Linked to African Communities in the EU

Financed by:	European Commission Daphne Program	
Coordinator:	Coventry University, UK	
Partners:		
International Centre for Reproductive Health CESIE, Sicily APF (Associação para o Planeamento da Família) FSAN FORWARD GES (Gabinet d’Estudis Socials)		Belgium Italy Portugal The Netherlands UK Spain
Budget:	24,363 EUR	
Start date:	18 March 2013	
End date:	18 March 2015	
Contact person at ICRH:	Els Leye Els.leye@ugent.be	

Replace 2 aims to implement and evaluate the REPLACE community-based behavior change intervention framework to tackle female genital mutilation (FGM) in the EU. This project continues the innovative behavioral change approach to ending FGM that was developed in the one year EU Daphne III funded REPLACE (2010-2011). REPLACE 2 will run for two years until 2015. Using a community participatory approach, REPLACE identified a number of barriers preventing the cessation of FGM in the EU. This insight facilitated the development of the REPLACE Pilot Toolkit that featured the REPLACE Behavioral Change Cyclic Framework. The project consists of two stages, whereby FORWARD and FSAN will evaluate the current Cyclic Framework with Somali and Sudanese communities and conduct and evaluate an intervention targeting behavior that is aimed at moving the community closer to ending FGM. CESIE, APF and GABINET will collect qualitative data on FGM among Senegalese, Gambian and Guinea Bissauan communities that will inform further intervention development based on the REPLACE approach. Both stages will further contribute to enhancing the REPLACE Toolkit. ICRH is engaged to evaluate the implementation of the project.

2.1.8 MATRIFOR: Approaching forced marriages as a new form of trafficking in human beings in Europe

Financed by:	European Commission ‘Prevention of and fight against crime’ Program	
Coordinator:	Universitat Autònoma de Barcelona, Spain	
Partners:		
International Centre for Reproductive Health Le Onde Onlus, Palermo		Belgium Italy
Budget:		
Start date:		41.027 € November 16, 2012

End date:	November 16 2015
Contact person at ICRH:	Els Leye Els.leye@ugent.be

The project aims at studying forced marriages as a new form of trafficking in human beings in Europe. The project will provide more knowledge on the causes, influencing factors and impact on the life and family of (potential victims) and looks at obstacles and difficulties to address forced marriages in Belgium, Spain and Italy. The methodology consist of a fieldwork phase, where in-depth interviews are conducted with 20 professionals and 10 interviews with (potential) victims, a comparative analysis of the legal framework in each country and a critical analysis how countries comply to the EU Directive 2011/36/UE, followed by an awareness raising intervention. Finally the project will provide recommendation to transpose the EU directive 2011/36/UE on Trafficking into national law.

2.1.9 Coordination of Ghent University Hospital holistic IPV protocol

Financed by:	Internal funding
Coordinator:	ICRH Belgium
Partners: Ghent University Hospital	
Budget:	
Start date:	1 December 2010
End date:	31 December 2014
Contact person at ICRH:	Ines Keygnaert Ines.keygnaert@ugent.be



Since 2004, Ghent University Hospital is implementing a gradually expanding protocol on sexual and partner violence. An evaluation in 2011 however revealed that too little key staff knew and applied this protocol in daily practice. The ones who did, found that the user-friendliness of the document and the coordination of the implementation in the field could be enhanced. Furthermore, the hospital was now more and more confronted with other types of violence too, which were not yet dealt with in the current procedures. A complete revision was thus required.

A multidisciplinary coordination working group was set up in 2011 composing of key staff of the Ghent University Hospital and external experts to assure an evidence-based and inclusive approach to all types of interpersonal violence. The working group firstly evaluated the current procedures on its strengths, weaknesses, opportunities and challenges after which an action plan was developed. Based on this action plan an evidence-based, holistic, inclusive and ethically sound

protocol on interpersonal violence is being developed. Sub procedures and implementation challenges were discussed, tested and developed throughout the course of 2012. Between June and October 2013, an IPV screening was done within the context of a master's thesis. The results will be discussed on the first working group meeting of 2014. In 2013 the protocol was to be finalized and formalized in the hospital quality standard operating procedures, but due to lack of resources these activities have been postponed. We hope to be able to continue this work in 2014. Once the protocol is integrated in the standard operating procedures, the inclusive protocol will be launched in a test phase and a communication campaign will be set up. Gradually, more and more staff will be trained to implement the IPV protocol until full implementation can be assured and evaluated.

2.2 OTHER ACTIVITIES

In addition to the national and international conferences and workshops that were organized within the context of the projects listed above, the SGBV team members participate in the following advisory committees and/or networks:

- Board of European Network for the Prevention of FGM
- Advisory commission of 'END FGM European Campaign – strategy for EU institutions', Amnesty International Ireland
- FGM Steering Committee of the World Health Organization, Geneva
- Member of the Belgian Platform Honor Related Violence

The SGBV team gave several tutorials, training sessions, workshops and guest lectures on violence related topics tailored to the specific capacity building needs of students in health and social sciences, health professionals, or lay public. 'Enhance your communication skills on violence' was for example a 2 to 8-hour workshop that was given at different occasions by Ines Keygnaert and An-Sofie Van Parys.

2.2.1 Working Group FGM of the Flemish Forum for Child Abuse

The Flemish Forum Child Abuse is operational since March 2011. It is based on a cooperation agreement between the Ministry of Justice and the Ministry of Welfare, Public Health and Family. It aims at discussing structural problems in dealing with child abuse at policy level; at actively seeking solutions and providing recommendations to relevant Flemish and federal authorities and to follow up and monitor the Protocol Child Abuse through training and sensitization.

Based on the need to prevent FGM, the Flemish Forum Child Abuse decided to create a working group FGM, whose mandate is to further follow up and steer the recommendations regarding this issue, that were provided to the Flemish Forum. Based on 3 focus groups that were organized by ICRH, GAMS and INTACT for Health sector, Welfare and Police/Justice, recommendations were provided with regard to:

- detection, risk assessment and follow up of FGM;
- tackling risk situations;
- exchange of information between several stakeholders.

ICRH is part of the working group, and collaborated in organizing the focus groups, formulating the recommendations and advice to the Flemish Forum regarding FGM, and in developing a protocol for 'Child and Family' (K&G/ONE) and the 'Centres for Student Monitoring' in schools (CLB).

2.2.2 Focal Point on Harmful Cultural Practices (F♀HCUS)

F♀HCUS wishes to promote the health, well-being and human rights of vulnerable groups by contributing to a critical reflection, by increasing knowledge and by delivering better services for those living with the consequences of, or who are at risk of undergoing, harmful cultural practices.

In 2013, the following activities were carried out.

Research:

- The influence of migration on forced marriages in Belgium, UK and Morocco (see supra);
- KAP-study among Flemish midwives on female genital mutilation;
- Qualitative study among Flemish midwives and gynecologists on communication for preventing female genital mutilation;
- Matrifor project 'Approaching forced marriages as a new form of trafficking'.

Service delivery:

- UZ F♀HCUS consultations for vulnerable women: every Friday afternoon in the University Hospital, specialized consultations are foreseen for women with female genital mutilation, women requesting hymen reconstructions and victims of sexual violence. Two research protocols were developed to collect socio-demographic data on women attending the consultations.
- Expertise delivery:
 - Advisory member of the END FGM –European Campaign, led by Amnesty International;
 - Member of the FGM Steering Committee of the World Health Organization, Geneva;
 - Member of Jury for Summer School Health and Migration, organized by Ghent University, July 2013;
 - ‘Training for hospitals in Flanders on female genital mutilation’, in collaboration with NGO GAMS, for the Federal Department of Public Health, January 2012 to March 2013;
 - Collaboration in High level event Ban FGM Campaign, Roma, 3-5 February 2013, rapporteur of the Plenary Session II: Compliance with the law – Article 5 UNGA Resolution;
 - Presentation of ‘Health sector responses to FGM in the EU’, at conference ‘The Health Care Services approach to FGM/C according to the therapeutic, prevention and salutogenic models’, Servizio Sanitario Emilio Romagna Region, Local Health Authority Bologna, February 6th 2013;
 - Seminar ‘Towards EU Action to end FGM’, chair of session ‘European responses to FGM’, European Parliament Brussels, February 27, 2013;
 - ‘Key policy developments on FGM at EU level’, presentation at ‘Ending female genital mutilation in Europe: exploring policies, approaches and lessons. A Pan European Conference’, London, February 28, 2013;

- ‘Towards a better estimation of the prevalence of FGM in the European Union’, oral presentation at the XXVII IUSSP International Population Conference, 26-31 August 2013, Busan, Korea, for the session: ‘Harmful traditional practices: female genital mutilation and other practices’;
- Evaluation of the REPLACE II Toolkit on community behavior change towards female genital mutilation, Consultancy for Coventry University, UK, March 2013 – March 2015.
- Co-promoting following PhD studies:
 - ‘Girls and women forced into marriage: understanding the impact of migration on Moroccan communities’ (Alexia Sabbe – International Centre for Reproductive Health);
 - ‘Female genital mutilation as a characteristic of religious identity among Coptic and Muslim women in Egypt’ (An Van Raemdonck - Centre for Intercultural Communication and Interaction CiCi of Ugent);
 - ‘The Impact of the international human rights framework on eradicating Female Genital Mutilation (FGM) in Senegal and Ethiopia’ (Annemarie Middelburg - International Victimology Institute Intervict of Tilburg University);
 - ‘Honor Related Violence in Flanders. Myth or reality?’ (Sofie Withaecx - RHEA Centre for Gender and Diversity of VUB).



WHO-FGM steering committee, September 2013

2.2.3 Migrants' sexual and reproductive health in the EU: a critical review of policy and legal frameworks

The objective of this review was to investigate the right of migrants to sexual and reproductive health and whether this right is ensured throughout the European Union in both national and EU legal and policy frameworks. It concentrates on three main issues: right and access to general health, to sexual and reproductive health, and prevention of and response to sexual violence. Particular attention was paid to the legal status of migrant populations and the impact this might have on their possibilities to exert their right to sexual and reproductive health. To this purpose, we included a wide range of academic and other literature. This allowed us to formulate recommendations for policy-making, notably at EU level, as well as for future research in the field. The method used was a Critical Interpretive Synthesis.

The results of this study were first presented at the 2nd International Conference of the International Network for Sexual Ethics and Politics (Ghent, 29th-31st August 2012). A first article on migrants' sexual and reproductive health and rights was accepted in *Health Policy* in October 2013 and published in January 2014. A second article, focusing on the issue of prevention of and response to sexual violence in migrants, will be submitted at the end of January 2014. Results are planned to be further presented at European migrant health fora in 2014. It has already been accepted for an oral presentation at the 5th EUPHA European Conference on Migrant and Ethnic Minority Health in April 2014.

Contact persons: Ines.keynaert@ugent.be & Aurore.quieu@ugent.be

2.2.4 Round table meetings on treatment of rape victims in hospitals

Victims of rape are often referred to hospitals. Yet the way in which they are cared for differs largely from hospital to hospital, and communication and collaboration with police and justice tends to be suboptimal. The 'Sexual Aggression Sets' (SAS), a forensic tool for gathering traces of the perpetrator on and in the body of the victim, is not always administered in the right way. Furthermore, even when the (supposed) perpetrator is known, victims often have to take Post-exposure prophylaxis (PEP) for several weeks to reduce the likelihood of HIV infection because the suspect refuses to be tested for HIV or wasn't even asked to be tested. Intake of PEP may cause considerable side effects. In many hospitals, PEP is not administered at all, thereby exposing the victim to potential HIV infection.

In order to map the situation and to identify solutions, ICRH, together with the Women's Clinic, the AIDS reference Center and the Steering Committee on Violence of the Ghent University Hospital, brought together experts from relevant hospital and university departments, representatives from judicial authorities and NGOs, and concerned politicians of all political parties. In two round table meetings, crucial aspects of the complex and delicate topic of treatment of rape victims were explored, and joint initiatives were taken into the direction of developing better communication and collaboration between hospitals and police, of facilitating both mandatory and voluntary HIV testing for supposed rape perpetrators mandatory, and of streamlining protocols, trainings and task division within and across hospitals. The round table meetings will be continued in 2014.

3. Contraception, maternal and newborn health

Every year, worldwide an estimated number of 273,500 women die from pregnancy or childbirth related causes. Furthermore every year an estimated 2.9 million babies die in the first four weeks of life. And although the international community agreed at the International Conference on Population and Development (ICPD) in Cairo (1994) to make reproductive health care universally available no later than 2015, many ICPD agenda items on sexual and reproductive health remain unfinished after 20 years.

Though lots of efforts to reduce global maternal and neonatal mortality and morbidity took place during the last decade, among others the Millennium Development Goals (MDG) initiative, neonatal and maternal mortality remains unacceptably high. The MDGs on maternal and child health, which aim to reduce the maternal mortality ratio by three quarters between 1990 and 2015 and the under-five mortality rate by two thirds, are far from reaching their targets. Even though data show progress on reducing maternal and neonatal mortality, this progress is still way below the annual decline needed to meet the MDG targets and most developing countries will take many years after 2015 to achieve these targets.

The overall objective of the ICRH 'maternal health team' is conducting research to contribute to improve maternal and neonatal health and well-being. This research aims to provide access to good quality maternal, neonatal, sexual and reproductive health care for all, with a focus on equity and integration and continuum of care. Working with and involving all levels of the society from community level to policy makers and all levels of the health system from community health workers to specialized hospitals is also considered crucial by the maternal health team in order to accomplish its objectives.

3.1 RESEARCH PROJECTS

3.1.1 Missed Opportunities in Maternal and Infant Health: reducing maternal and newborn mortality and morbidity in the year after childbirth through combined facility- and community-based interventions (MOMI)

Financed by:	European Commission – FP7	
Coordinator:	ICRH Belgium	
Partners:		
Institut de Recherche en Sciences de la Santé	Burkina Faso	
ICRH Kenya	Kenya	
Parent and Child Health Initiative	Malawi	
ICRH Mozambique	Mozambique	
Eduardo Mondlane University – Faculdade de Medicina	Mozambique	
Faculdade de Medicina da Universidade do Porto - Department of Hygiene and Epidemiology	Portugal	
Institute for Global Health, University	United Kingdom	

College of London	
Budget:	2,997,647 EUR
Start date:	1 February 2011
End date:	31 January 2016
Contact person at ICRH:	Els Duysburgh Els.duysburgh@ugent.be Aurore Guieu Aurore.guieu@ugent.be

In the past decade, maternal health services have largely focused on rationalizing the package of antenatal services and on the management of intrapartum complications including the provision of emergency obstetric care by skilled birth attendants. These interventions have sought to target what are widely considered to be the most common and immediate causes of maternal death. Yet this approach fails to address many underlying morbidities that are instrumental in generating high rates of maternal mortality, such as anemia and inadequate birth spacing. Also missing is a direct focus on the substantial proportion of maternal deaths in the postpartum. The essential package and optimum structure of postpartum services for women and newborns in Africa remains poorly defined, with many missed opportunities for improved care.

The MOMI project intends to develop and implement an integrated package of interventions targeting women and newborn health in the early postpartum period and throughout the first year after childbirth. This package is delivered through a combined facility- and community-based approach designed to integrate services and strengthen health systems. It is implemented in four African countries (Burkina Faso, Kenya, Malawi and Mozambique) by a consortium of five African and three European partners.



The MOMI Consortium meets face-to-face in Mozambique (March 2013) for the third time.

Following the situation and policy analysis conducted in 2012, two reports were drafted in 2013. The first one critically reviews current maternal, newborn and child policies in the four African countries, while the second provides an overview of the existing post-partum care services – both at facility and community levels - in the districts where MOMI is active. Those two reports are available on the MOMI website.

In 2013, MOMI team members have been primarily busy with the implementation of the intervention at the different sites as well as the development of monitoring and evaluation tools to assess the impact and outcomes of the project. The consortium met for the third time in March 2013 in Maputo, Mozambique. For each site the selected packages of interventions were discussed and an implementation plan was agreed upon. Field visits were also organized during the Autumn 2013. MOMI technical European partners visited the four study sites to support the initiation of the interventions implementation and the evaluation and monitoring activities.

MOMI progress was communicated to regional and international audiences throughout the year, thanks to the participation of MOMI team members to a range of conferences and other events. MOMI was also present in the news on specific occasions, for example World Humanitarian Day. Regular updates on the project are given through the MOMI newsletter, published biyearly, as well as on its website. At local levels, MOMI is continuously discussed with other stakeholders and policy-makers, notably through the Policy Advisory Boards established at the outset of the project in all four sites.

Project website: <http://www.momiproject.eu/>



Field Visits, October 2013: UG-ICRH team members visit Burkina Faso (left) and Kenya (right) sites

3.1.2 Quality of Maternal and Prenatal Care: Bridging the Know-Do Gap (QUALMAT)

Financed by:	European Commission – FP7	
Coordinator:	University of Heidelberg, Germany	
Partners:		
ICRH Belgium		Belgium
Centre de Recherche en Santé de Nouna		Burkina Faso
Navrongo Health Research Centre		Ghana
Karolinska Institute		Sweden
Muhimbili University of health and Allied Sciences		Tanzania
Budget:		2,915,228 EUR
Start date:		1 May 2009
End date:		30 April 2014
Contact person at ICRH:	Els Duysburgh Els.duysburgh@ugent.be	

Maternal and neonatal mortality and morbidity remain unacceptably high in sub-Saharan Africa. Though sub-Saharan Africa is home to only 13% of the world population and 19% of the global under-5 population, an estimated 52% of all maternal deaths and 49% of all under-5 deaths occurred in this region.

The QUALMAT project is an intervention research project aiming to improve maternal and newborn health by improving the quality of maternal and neonatal care through addressing the existing gap between ‘knowing what to do’ and ‘doing what you know’. To address this, two kinds of interventions have been implemented: (1) performance-based incentives to increase health workers’ motivation and (2) a computer-assisted clinical decision support, which will help providers to comply with established standards of care.

QUALMAT is implemented by a consortium of six European and African partners in three resource-poor countries highly burdened by maternal and neonatal mortality: Burkina Faso, Ghana and Tanzania. In each country, an intervention and a control district were selected, and in each of these districts six health facilities were selected to be included in the research project.

In the QUALMAT project ICRH Belgium is responsible for documenting changes in the quality of maternal and newborn care caused by the QUALMAT interventions. Intervention implementation started in summer 2012. During 2013 regular monitoring of the quality of provided care has been taking place.

As QUALMAT enters its final project months the preparation of the post-intervention quality assessment was initiated in October 2013. For this post-intervention quality assessment the same tools are used as those of the baseline quality assessment. Results of both assessments (pre- and post-intervention and intervention against non-intervention health facilities) will be compared and assessed for statistically significant changes in quality of maternal and neonatal care.

Project website: <http://www.qualmat.net/>

3.1.3 Reducing maternal mortality through maternity waiting homes

Financed by:	Collibri Foundation for Education	
Coordinator:	ICRH Global	
Partners:		
ICRH Kenya		Mombasa, Kenya
Budget	60,000 EUR	
Start date:	1 October 2011	
End date:	30 April 2014	
Contact person at ICRH:	Dirk Van Braeckel dirk.vanbraeckel@ugent.be	

In Africa, one out of 210 mothers dies during pregnancy or delivery. One of the causes is the relatively low rate of institutional deliveries, due to transport problems and lack of infrastructure, but also due to cultural prejudices and resistance against giving birth outside the family circle. One of the ways to facilitate and encourage institutional deliveries is the establishment of 'maternity shelters' or 'maternity waiting homes': facilities where future mothers can spend the last few days of their pregnancy close to a maternity hospital, so that they are assured of timely professional care during the delivery. This type of facilities exists in many African countries, but often the functioning is not optimal and the occupancy rate is much lower than it could be. ICRH launched a project in Kenya and in Mozambique, aimed at promoting the use of maternity waiting homes and improving their functioning. Activities consist in:

- Informing and sensitizing community leaders, future mothers, their partners and families, and the community in general about the purpose and the importance of maternity waiting homes;
- Reinforcing the functioning of a number of selected homes;
- Looking, together with the staff and management of the selected homes, for ways to improve the service delivery and to provide health education on nutrition, family planning and infections to the women staying in the homes.

The activities in Mozambique were halted in the beginning of 2013 because of insurmountable problems, but in Kenya the project is prospering. In the course of 2013, the occupancy rate of the maternity shelters in Malindi and Kilifi increased gradually to more than 30 admissions per shelter per month, which is close to the maximum capacity. Satisfaction is high among the users, the cooperation with the hospitals is excellent and the data that are being collected will allow to publish articles that can contribute to making the concept better known and demonstrating its benefits. As the funding by Collibri Foundation expires in 2014 and it is far from sure that it will be renewed, other sources of income are being sought to ensure the continuation of the project in the next few years. At the same time, possibilities are being explored to make the shelters financially independent from donor funding in the mid- to long term.

3.1.4 Integrating Post-Abortion Family Planning Services into China's Existing Abortion Services in Hospital Settings (INPAC)

Financed by:	European Commission – FP7
Coordinator:	ICRH Belgium
Partners:	
Chinese Society for Family Planning- Chinese Medical Association	China
Fudan University	China
National Research Institute for Family Planning	China
Sichuan University	China
University of Aarhus - Danish Epidemiology Science Centre	Denmark
Liverpool School of Tropical Medicine	UK
Budget:	2,928,384 EUR
Start date:	1 August 2012
End date:	31 July 2016
Contact person at ICRH:	Wei-Hong Zhang WeiHong.Zhang@UGent.be Shuchen Wang Shuchen.Wang@ugent.be

Repeated induced abortion is associated with a high risk of long-term physical and psychological morbidity and with a heavy social-economic burden. The large numbers of induced abortions in China are primarily due to contraceptive failure or less/no use of contraception.

The **INPAC** project aims to integrate post-abortion family planning services into existing abortion services in hospital settings in China and to evaluate the effect of this integration on the decrease of unintended pregnancies and repeat abortions. Based on the project findings, policy recommendations on health system organization aiming to improve equitable access to reproductive healthcare and family planning service will be developed.

The project has four phases: phase I - situation analysis, phase II - development of interventions strategies, phase III - intervention implementation and monitoring and phase IV - operational and analytical evaluation.

By the end of 2013, INPAC had completed phase I and phase II. Phase I included a literature review and quantitative and qualitative surveys on the provision and utilization of abortion services. The reports of these activities were submitted to the EC in March and November 2013. The phase II intervention protocol was developed based on the results of phase I and with inputs from the INPAC Policy Advisory Board, the Chinese National Family Planning Committee and the Department of Reproductive Health and Research of WHO.

In 2013 the following activities have taken place:

- A training program and a seminar on the qualitative study have been held in Beijing;
- The qualitative study was conducted in three provinces and included 18 focus group discussions and 93 in-depth interviews with key stakeholders (abortion service users, women and men from

the general population, policy makers, health service managers and health service providers). Quantitative data on the characteristics of women seeking abortion was collected from 298 hospitals in 30 provinces;

- The 2nd project management team meeting and the 1st policy advisory board meeting were hosted by the Sichuan team in Chongqing in September and a dissemination workshop was organized together with the 2nd policy advisory board meeting by partner NRIFP in Beijing in December;
- Three field visits have been conducted by project coordinator Wei-Hong Zhang (ICRH), nine cities/countries and 24 general or maternal & Child hospitals were visited for monitoring of the quantitative data collection and for understanding the feasibility of intervention packages;
- Two abstracts were presented at the 13th ESC Congress in Copenhagen.

During 2013 also the participation of the department of Reproductive Health and Research of WHO has been discussed and progressed. The WHO experts will among others provide inputs in the intervention design, dissemination activities and the elaboration of policy recommendations.

From January 2014, the INPAC project moves to phase III – implementation and monitoring of a randomized controlled trail in 90 hospitals in 30 provinces.

Project website: <http://www.inpacproject.eu>



The 2nd INPAC annual meeting (PMT meeting) in Chongqing, China, September 2013.

3.2 OTHER ACTIVITIES

3.2.1. Comprehensive needs assessment of newborn care in selected countries in East Asia and the Pacific

Between November 2012 and March 2013, ICRH, together with HERA, conducted a newborn care assessments in Indonesia, Lao People's Democratic Republic and the Philippines on behalf of UNICEF East Asia and Pacific Regional Office.

The main objective of the assignment was to conduct a comprehensive, equity-focused needs assessment for newborn care and programming in three selected countries. Three individual country reports and one cross country report including findings and recommendations with respect to planning and implementation of newborn health programmes were submitted to UNICEF East Asia and Pacific Regional Office at the end of March 2013 (see cross-country report: http://www.unicef.org/eapro/comprehensive_needs_assessment_of_newborn_care.pdf). The contents of these reports will contribute to programme strengthening in all countries covered by the regional office of UNICEF in East Asia and the Pacific.

4. Adolescent sexual and reproductive health

4.1 RESEARCH PROJECTS

4.1.1 Community Embedded Reproductive Care for Adolescents in Latin America (CERCA)

Financed by:	European Commission – Framework 7 Program	
Coordinator:	ICRH Belgium	
Partners:		
South Group, Bolivia		Bolivia
University of Cuenca, Ecuador		Ecuador
Kaunas University of Medicine, Lithuania		Lithuania
University of Amsterdam		The Netherlands
National Autonomous University of Nicaragua		Nicaragua
Instituto Centro Americano de la Salud		Nicaragua
Budget:	2,893,700 EUR	
Start date:	1 March 2010	
End date:	28 February 2014	
Contact person at ICRH:	Peter Decat Peter.decat@ugent.be Sara De Meyer SaraA.demeyer@ugent.be	



In Latin America, adolescent sexual activity starts early, with little effort made to prevent sexually transmitted infections or pregnancy, resulting in high incidence of teenage pregnancies, unsafe abortions and sexually transmitted infections. Latin American governments and health policy implementers demand sound proof of effective strategies to improve adolescent sexual and reproductive health (SRH). CERCA (Community-Embedded Reproductive health Care for Adolescents in Latin-America) has aimed to improve global knowledge about how health systems could be more responsive to the changing SRH needs of adolescents. Implemented by Latin American and European research institutes in Bolivia, Ecuador, and Nicaragua, CERCA tested community-embedded interventions to improve adolescent communication on SRH issues; access to accurate SRH information; use of SRH services in primary health settings; and use of modern contraceptives. One randomized and two non-randomized controlled studies demonstrated the interventions' usefulness. In 2013 the CERCA project finalized the analysis of the collected data and disseminated the findings.

CERCA generated new quantitative and qualitative evidence on determinants of adolescent SRH; demonstrated multi-level intervention strategy impact; identified feasible, promising new interventions; and generated expertise in development of adolescent SRH research. Monitoring and quantitative survey data demonstrated feasibility, acceptability and statistically significant impact and outcomes for: use of mobile phone messages for outreach; service provision by trained young adults and health providers in community; and provision of adolescent friendly services in primary health care centers and schools.

Specific results:

- Statistically significantly more adolescents in the intervention group used condoms on average compared with the control group (Ecuador).
- Statistically significant association between participation in intervention activities and ease of communication on SRH (Bolivia).
- Adolescents exposed to the intervention were 1.4 times more likely to have a positive trend in overall knowledge and use of sexual health services than control group adolescents (Ecuador).
- Adolescents believing in gender equality are 1.18 times more likely to use contraception (aOR: 1.58, 95% CI: 1.18; 2.11).
- Statistically significant modulating effect of religiosity on adolescent condom use (Bolivia).
- Factorial validation of the Attitudes toward Women Scale for Adolescents (AWSA) in assessing sexual behavior patterns in Bolivian and Ecuadorian adolescents.
- The identification of socio-cultural, health system related and adolescent-specific factors that according to health providers affect young people's access to existing health services.
- The CERCA project explored the pragmatics of adolescents' communication on sex that includes silence, implied expectations, gendered conflicts, and temporally delayed knowledge.
- The qualitative research revealed power dynamics related to shifting socio-sexual norms on issues such as the reputational value of female virginity, knowledge versus use of modern contraceptives, and adult control over young people's relationship and sexual choices.
- In Ecuador 105,456 people were reached by a CERCA activity; and in Nicaragua 12,108 adolescents, 220 health authorities, 7160 parents, 6079 community members participated in CERCA activities.

- Overall, 516 activities have disseminated CERCA results, including:
 - 4 scientific articles published in A1 open access scientific journals;
 - 4 scientific articles submitted for review to A1 scientific journals;
 - 1 scientific article published in A2 scientific journal;
 - In progress: 2 scientific articles to be submitted to an A1 scientific journal;
 - In progress: 1 scientific article to be submitted to an A2 scientific journal;
 - Abstract book of the international conference in Managua (September 2013);
 - 3 country reports on the main study results;
 - 3 freely downloadable documentary videos;
 - An online course on provider-patient communication.

The CERCA research had a policy impact at local level (establishment of local adolescent SRH networks with city government funding, adolescent-friendly services installed in health centers, use of CERCA approach for sexual education in schools), at national level (CERCA researchers contributed to the development of national strategies for adolescent pregnancy prevention) and at international level (CERCA researchers invited as experts to WHO meetings in Geneva (2013) and Ankara (2014) for development of research protocols related to adolescent sexual health).

ICRH started planning the dissemination and further planning of the CERCA results after the project will have ended. This will happen in close collaboration with the Department of Reproductive Health and Research of the World Health Organization.

Project website: www.proyectocerca.org

4.1.2 Introducing provider-patient communication as a new topic for training and research at health institutes in Cochabamba (Bolivia) and Cuenca (Ecuador).

Financed by:	VLIR-UOS
Coordinator:	ICRH Belgium
Partners:	
Centro de investigación y estudios de la salud- Universidad Nacional Autónoma de Managua (CIES-UNAN)	Nicaragua
The Faculty of Medicine of the University of Cuenca (UC).	Ecuador
South Group	Bolivia
Budget:	70,560 EUR
Start date:	1 June 2012
End date:	1 May 2014
Contact person at ICRH:	Peter Decat peter.decat@ugent.be

The topic provider-patient communication is relatively underrepresented in training and research of academic institutions in Latin-America. The project aims to promote communication skills of health professionals in Cuenca and Cochabamba. The project takes advantage of the experiences in Nicaragua



to introduce the topic in Ecuador and Bolivia by initiating training and research activities in 'provider-patient communication' in Cuenca and Cochabamba. An online course on doctor patient communication has been set up. The online course was available via the Zephyr platform for the University of Ghent.

The aim of the online course is to introduce the participants to the theory provider communication and to improve communicative

skills through practical exercises. Stories and videos are used to illustrate the theory. The videos consisted partially of available material downloaded from the internet and own records of consultations with simulated patients in the three countries. Workshops have been organized in two cities. Consultations of physicians have been videotaped for research purposes. A conference on provider-patient communication has been organized in Cuenca, Ecuador.

4.1.3 Quality health care in primary health services in Nicaragua

Financed by:	VLIR-UOS
Coordinator:	ICRH Belgium
Partners:	
Universidad Nacional Autónoma de Nicaragua, facultad de Medicina	Nicaragua
Budget:	306,758 EUR
Start date:	1 October 2008
End date:	30 September 2013
Contact person at ICRH:	Peter Decat peter.decat@ugent.be

The project aims to improve the quality of primary health care in Nicaragua. The pivotal theme of the project is reproductive health care delivery in primary health services. In 2013 health providers and medical students received training in provider-patient communication, conflict management and the rational use of medicines. An online course on doctor patient communication has been set up. The online course was available via the Zephyr platform for the University of Ghent.

During this last year of the project the previously collected data were analyzed and scientific articles

have been written or are in progress:

- Unpredictability of health services in Nicaragua: a barrier for access to and quality of health care in primary health services in Nicaragua (in progress).
- Doctor-patient communication from the perspective of the patients in 3 health care centers in Nicaragua (in progress).
- 'Digame, ¿Por qué viene?' : Patient orientation in physician-patient communication in primary healthcare centers in Nicaragua (in progress).
- Prescription and delivery of pharmaceuticals by health professionals in primary health centers (published in Nicaragua).
- Health professionals and conflict management in primary health centers (published in Nicaragua).
- Behavior of health professionals related to organizational reforms in health centers (published in Nicaragua).

The outcomes of the project were presented in an international conference, organized in Managua (Nicaragua) on the 18th and 19th of September 18th and 19th 2013. This conference was attended by guests from Central America, Panama, Ecuador and Belgium with a total of seventy participants during the two days.

4.2 OTHER ACTIVITIES

4.2.1 Expert group on Sexuality Education in Europe

ICRH is a member of the Expert Group on Sexuality Education in Europe. This group is led by the German Federal Centre for Health Education (BZGA) in collaboration with the World Health Organization. From 30 September until 1 October 2013, the Expert Group met in Cologne during a 1.5 days' workshop. They discussed fundamental questions and objectives as well as key issues of evaluation of holistic sexuality education and the identification of qualitative indicators. ICRH contributed to the preparation and co-chaired this workshop. A group of experts is now working together on a position paper on evaluation of holistic sexuality education. This article is foreseen for 2014.

4.2.2 Platform Adolescents, Relationships and Sexuality

The Platform Adolescents, Relationships and Sexuality is a consultation platform for Flemish organizations who work on topics related to relationships and sexuality. The platform is coordinated by Sensoa - the Flemish center of expertise for sexual health - and ICRH is since 2010 one of the members of the Platform. During the meetings the members of the platform and external experts debate on various topical subjects. Each year they also organize the 'week of spring fever' during which they sensitize adolescents on sexual and reproductive health topics. In 2013 special attention was given to STI's and chlamydia.

For more information: SaraA.demeyer@Ugent.be

5. Sex workers

5.1 RESEARCH PROJECTS

5.1.1 Improved Sexual and Reproductive Health and Rights Services for Most at Risk Populations (MARPs) in Tete, Mozambique

Financed by:	Flemish International Cooperation Agency; United States Agency for International Development; Vale do Rio Doce	
Coordinator:	ICRH Belgium	
Partners:		
ICRH Belgium		Belgium
ICRH Mozambique		Mozambique
Provincial Health Directorate of Tete		Mozambique
Budget:	1,162,819 EUR	
Start date:	1 October 2010	
End date:	30 September 2015	
Contact person at ICRH:	Yves Lafort yves.lafort@ugent.be	



Night clinic in Moatize

In 2011 ICRH initiated a project that aims at expanding and improving sexual and reproductive health and rights (SRHR) among most-at-risk populations in the Tete-Moatize area in central Mozambique. The main target populations are female sex workers (FSW) and their male clients. The project builds on the previous projects supporting a drop-in clinic ('night clinic') for FSW and truck drivers in Moatize. During the course of the project, the current clinic is replaced by two clinics: one larger clinic in Moatize and one in Tete-City, and the services are expanded to a comprehensive package of all SRHR services. The health facility-based services are complemented by community outreach activities, comprising behaviour change communication and structural interventions to create a supportive environment for a sustained behaviour change. Special attention is given to reaching FSW's clients through interventions in entertainment venues and at the workplace. The impact of the project will be carefully assessed through a pre-post assessment comparison that includes qualitative and quantitative data collection techniques. During 2013, the support for the night clinic was continued and the new clinic in Moatize started operating. Most of the baseline assessments (key informant interviews, in-depth interviews with FSW and clients, and focus group discussion with FSW) were finalised and the baseline cross-sectional survey among FSW was initiated. A no-cost extension until September 2015 was requested and approved.

5.1.2 Diagonal Interventions to Fast Forward Enhanced Reproductive Health (DIFFER)

Financed by:	European Commission – FP7	
Coordinator:	ICRH Belgium	
Partners:		
ICRH Belgium	Belgium	
Ashodaya Samithi	India	
ICRH Kenya	Kenya	
ICRH Mozambique	Mozambique	
University of The Witwatersrand - MatCH & Centre for Health Policy	South Africa	
University College London, Centre for International Health & Development	United Kingdom	
Budget:	2,997,443 EUR	
Start date:	1 October 2011	
End date:	30 September 2016	
Contact person at ICRH:	Yves Lafort yves.lafort@ugent.be Aurore Guieu aurore.guieu@ugent.be	

The DIFFER project was officially launched in October 2011 during a kick-off meeting in Mombasa, Kenya. DIFFER stands for 'Diagonal Interventions to Fast-Forward Enhanced Reproductive Health' and aims at improving access to sexual and reproductive health (SRH) for the most vulnerable by a better linkage between interventions targeted at most-at-risk populations, in particular female sex workers (FSW), and the general reproductive health services. The project is implemented at four sites in Kenya (Mombasa), Mozambique (Tete), South Africa (Durban) and India (Mysore). The project has a strong south-south

component and aims at translating previous successes and lessons learned in India to the Sub-Saharan African context.

A comprehensive policy and situational analysis was conducted in 2012-2013 and results were combined in two reports. The first assesses the current policies around sexual and reproductive health services for sex workers in the four study sites, while the second focuses on the services available for both sex workers and general women to identify potential ways of improving SRH care for both groups. The DIFFER consortium met for the second time face-to-face in Durban, South Africa, in February 2013. This was the occasion to present the preliminary results of the policy and situation analysis and to orientate the packages of intervention to be implemented in the four study sites accordingly. At the end of the 5-years project those packages will be evaluated for their feasibility, acceptability, effectiveness, cost-effectiveness and sustainability. The DIFFER consortium met again in Mysore, India, in December 2013, to discuss the roll-out of the interventions as well as other project management questions.

DIFFER progress is regularly communicated through its newsletter, published after each face-to-face consortium meeting, and its website. Stakeholders are involved at each site, notably through the Policy Advisory Boards.

Project website: <http://www.differproject.eu/>



The DIFFER consortium in Mysore, India (December 2013)



Nightly outreach activities with female sex workers in Durban, South Africa

6. Other activities

6.1 WHO Collaborating Centre

ICRH has been designated as a WHO Collaborating Centre for Research on Sexual and Reproductive Health since 2004, and has been redesignated for a new term of four years in June 2013. On the occasion of the redesignation, new terms of reference have been agreed upon:

- To conduct epidemiological, operations and implementation research on family planning, STIs (including HIV), gender-based violence and harmful practices.
- To support WHO's capacity building efforts in the area of reproductive health
- To communicate the results of research relevant for policy-making

For each of these terms of reference, concrete action have been defined.

2013 was characterized by an intensification of the collaboration with WHO. ICRH experts participated in several WHO expert panels on HPV, FGM, family planning and maternal health, and options to pursue joint projects were explored during face to face meetings and phone conferences.

6.2 FWO international coordination

Financed by:	Research Foundation Flanders
Coordinator:	ICRH Belgium
Budget:	208,800 EUR
Start date:	1 January 2012
End date:	31 December 2014
Contact person at ICRH:	Dirk Van Braeckel dirk.vanbraeckel@ugent.be

The Research Foundation Flanders supports the International Research Network of ICRH 'WHO Collaborating Centre for Research on Sexual and Reproductive Health'. The aim of this network is to provide technical and logistical support for:

- Operational and applied research;
- The design, planning, implementation, monitoring and evaluation of reproductive health programmes;
- Established and new networks;
- Training;
- Policy dialogue and advocacy.

6.3 Institutional University Cooperation Program with the University Eduardo Mondlane of Mozambique (DESAFIO)

Financed by:	Belgian Development Cooperation through the Flemish Interuniversity Council - University Cooperation for Development (VLIR-UOS)	
Coordinator:	ICRH Belgium	
Partners:		
University Eduardo Mondlane	Mozambique	
Ghent University	Belgium	
University of Antwerp	Belgium	
Vrije Universiteit Brussel	Belgium	
Katholieke Universiteit Leuven	Belgium	
Hasselt University	Belgium	
Budget (phase 2):	2,680,000 EUR	
Start date (phase 2):	1 April 2013	
End date (phase 2):	31 March 2018	
Contact persons at ICRH:	Olivier Degomme (olivier.degomme@ugent.be)	



ICRH is coordinating the VLIR-UOS-funded Institutional University Cooperation (IUC) Program with the University Eduardo Mondlane (UEM) of Mozambique. The program, called DESAFIO, has the objective to strengthen UEM as a developmental actor in Mozambican society in the area of sexual and reproductive health and rights (SRHR) and HIV/AIDS. It is based on a long term collaboration between UEM and all Flemish universities, comprising a two-years preparatory pre-partner program and two five-years partner programs. The program consists of eight projects. Four projects address a sub-theme of the central theme (human rights; social rights and social protection; gender, health and family issues; and reproductive health and HIV/AIDS) and three cross-cutting projects strengthen capacity in specific areas. Activities include conducting joint research in the different areas of reproductive health and HIV/AIDS; enhancing the capacity of UEM academic staff through training, including master and PhD degrees; strengthening UEM's training capacity by developing master courses; strengthening teaching and research skills, ICT, library sciences, academic English and biostatistics at UEM; and conducting community-based outreach activities. The first phase of the project started in April 2008. In September 2013, the second five year phase of the project was officially launched.

6.4 Focusing on medical health problems in (post)conflict situations

Financed by:	Flemish Interuniversity Council
Coordinator:	ICRH Belgium
Partners:	
Université Catholique de Bukavu	Democratic Republic of Congo
Budget:	252,871 EUR
Start date:	April 2011
End date:	April 2023
Contact person at ICRH:	Steven Callens steven.callens@ugent.be

Several years of recurrent conflict in the Congo have ended up destroying the health system of the Republic of Congo (DRC) in general, but particularly the South Kivu Province, resulting in:

- (1) Rising rates of mother and child morbidity. The fight against diseases of reproductive health is a priority of the Congolese government in the process of reconstruction in post-conflict.
- (2) An increase in chronic non-communicable diseases during this decade.

In the first year this project focused on the integration within the faculty of medicine of the Catholic University of Bukavu. Particular attention will be focused on building strategic relationships between sub-disciplines of medical school and the newly established school of public health. A document with a strategic vision and mandate of the Research Office will be prepared after consultation between the sub-disciplines of medicine, the rector and the university authorities.

The research focus will be placed on finding suitable sites for cohorts to be followed longitudinally in rural and urban areas. The scientific focus is on chronic non-communicable diseases. Finally, there is a project on sexual health, where we first examine the use of traditional methods of family planning. Particular attention will be given to traditional methods potentially dangerous to the

health of women and barriers to using modern methods. It will also examine which of the modern methods of family planning are acceptable and economically viable in the long term.

The second phase of the project will start. Three PhD students are currently working on the projects.

6.5 Millennium development goals campaign: '2015 – time is running'

ICRH is member of the coalition of Flemish development NGOs '2015 – de tijd loopt' ('2015 – time is running'). This coalition aims at keeping the millennium development goals (MDG) on the public and the political agenda. In 2013, the activities of the coalition focused the position of the Belgian government in the Rio+20 and the post MDG processes.



6.6 Ghent Africa Platform

ICRH is an active member of the Ghent Africa Platform (GAP). GAP is an umbrella organisation of several, sometimes very diverse, actors belonging to the Ghent University Association, that focus on the African continent. It offers a forum within which they can intensify mutual contacts, get to know and discuss their collective, interdisciplinary interests and possibly turn this into joint research, publications and/or the implementation of these within the scope of development aid. On 6 December 2013 GAP organized its seventh annual symposium: 'Africa and Food: challenges, risks and opportunities'. ICRH is a core member of the Platform and was represented in the scientific committee of the symposium.

6.7 Intercultural Women Network 'Oog in Oog'

Since 2011, ICRH participates in the Intercultural Women Network 'Oog in Oog'. This network is a collaboration of more than twenty organizations, all active in Ghent and the Province of East-Flanders and working on the topic of gender. Besides ICRH, representatives of the city of Ghent, of the Province of East-Flanders and of migrant- women- and homosexual and lesbian organizations participate. Together, they realize different activities. In 2013 they organized, among others, an intercultural event on 8 March to celebrate the International Women's Day and various lunch meetings.

Website network: <http://ooginoog.be/>

For more information: SaraA.demeyer@Ugent.be

6.8 ICRH Belgium lectures

In May 2013 ICRH Belgium organized two lectures: one on 'adolescents and sexuality' and another on 'violence throughout life'. The lectures were aimed at a broad target audience of students, researchers, people from NGOs and policy makers.

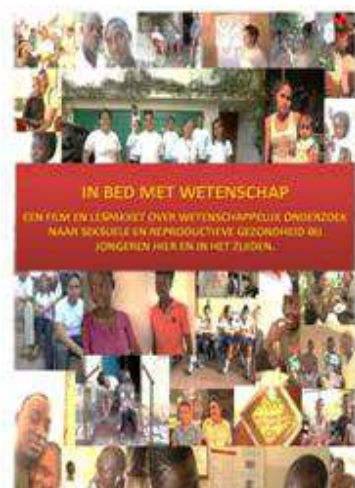
On May 23th ICRH, Sensoa and Plan Belgium gave a lecture on 'adolescents and sexuality'. Each organization shed a light on the topic from their own perspective. Statistics, video testimonies, frameworks and good practices on improvement of adolescents 'sexuality' were presented.

The lecture on 'violence throughout life' took place on May 28th. Various academic and clinical experts gave an overview of experiences of (vulnerability to) violence at different stages of life and how this may be interconnected: as a child, as an adolescent, as an adult and as an elder person.

Both lectures took place in Ghent (Vredeshuis).

For more information: SaraA.demeyer@ugent.be (adolescents) and Ines.keygnaert@ugent.be (violence throughout life).

6.9 Launch educational package 'In bed with science'.



In September ICRH Belgium launched the educational package 'In bed with science'. 'In bed with science' hopes to sensitize young people on the importance of scientific research and wants to improve knowledge and raise public opinion on sexuality and sexuality education for young people here and in the South.

In bed with science is an educational package (2*50min) for the third grade of secondary high school. The package consists of an educational video and related questions (and answers) which enable teachers to guide discussions on (the importance of) scientific research and the social services it can lead to, as well as on (the importance of) sexuality and sexuality education here and in the South. The video brings into vision research on adolescent sexual and reproductive health in Kenya and Nicaragua. Some research interventions - conducted by adolescents - such as workshops on sexual and gender based violence

in Nicaragua and elements of the work of peer educators in Kenya are shown. Furthermore diverse social services, which are results of former research projects, are presented.

For more information: SaraA.demeyer@Ugent.be

'In bed with science' is only available in Dutch and can be downloaded at: <http://icrhb.org/project/bed-science-bed-met-wetenschap>

6.10 Patricia Claeys award

Prof. Patricia Claeys was for many years the executive director of the ICRH and an inspiring friend and colleague. She passed away far too early. In her memory, ICRH has instituted a yearly 'Patricia Claeys Award', which was presented for the first time in June 2012.

ICRH offers the 'Patricia Claeys Award' annually to a health sciences student who shows a remarkable interest and commitment for international health. This year, the jury selected Mieke Cattrysse, graduated as master in Health Promotion. The Award was handed over by Patricia's daughters, Ruth and Sarah, during the graduate ceremony. In his laudation, Prof. Guy Vanderstraeten, Dean of the Faculty of

Medicine and Health Sciences and Chairman of the Patricia Claeys Award Jury, praised the high quality thesis that Mieke wrote on the contraceptive use in Maya and Ladino populations in Mexico. In addition, he commended Mieke's non-nonsense and committed attitude in her contacts with professionals and patients in Mexico.

6.11 Marleen Temmerman Fund



Ghent University establishment the Marleen Temmerman Fund in honor to professor Temmerman and to continuously support the activities of the International Centre for Reproductive Health (ICRH).

ICRH has extremely limited core funding and therefore has to rely mainly on project funding and donations. The Marleen Temmerman Fund will help to structure and attract the donations stream of income. The fund was launched on 25 November 2013. For 2014, three projects were selected that will benefit from the donations that will be made through the fund:

- Home visits for new mothers in Kenya, Mozambique, Burkina Faso and Malawi
- An Internship Program for African researchers
- Research into Sexual Violence in Mombasa (Kenya)

More information and online donations: www.fondsmarleentemmerman.ugent.be

6.12 Be-cause Health People Centred Care working group (PCC WG)

ICRH is an active member of Be-cause health, an informal and pluralistic Belgian platform which is open to institutional and individual members that are involved in international health issues. The working group people centred care (PCC), presided by ICRH, has been invited to organize a session during the 8th European Congress on Tropical Medicine and International Health organized 10 – 13 September 2013 in Copenhagen, Denmark. The ICRH took the lead in preparing this session titled Universal Health Coverage: yes, but coverage of what? The need for people-centred Care.

Contact person at ICRH: Peter Decat, peter.decat@ugent.be

6.13 PhD defenses

In 2013 the following ICRH scholars successfully defended their PhD:



Marlise Richter: 18 June 2013

Marlise's research indicates the diversity of the sex industry and the people who work in it. Sex work is an important livelihood strategy that provides an income for sex workers and their extended network of dependents. Migration is a vital component for exploring and understanding how many sex worker lives and work are structured in South Africa. Sex workers are subject to violence from police and their non-commercial partners, while unprotected sex with non-commercial partners emerges as an important risk factor for HIV.

Moreover, this thesis highlights the shortcomings of health care services in responding to the needs of sex workers. It recommends the rolling-out of specialized, sex work-specific health care services in areas of sex work concentration, and sex work-friendly services in mainstream health care facilities in areas of lower sex work concentration. Non-judgmental and empathetic health workers are a key component of responsive services. Lastly and perhaps most importantly, it underscores the importance of decriminalizing sex work in order to safeguard sex worker rights and to protect individual and public health.

Marlise's work was supervised by prof. Marleen Temmerman and prof. Matthew Chersich.

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The thesis can be downloaded from the ICRH website at:

<http://icrhb.org/sites/default/files/PhD%20thesis%20Marlise%20Richter%209%20june%202013%20monograph%20final.pdf>



Inge Tency: 28 June 2013

Preterm birth (PTB) is the leading cause of perinatal morbidity and mortality worldwide. Despite significant advances in perinatal care and advancing knowledge of risk factors and mechanisms associated with PTB, there has been little progress in reducing the PTB rate. Diagnosis of preterm labour as well as accurate prediction of PTB is notoriously difficult, because of the heterogeneity of the condition. A tremendous amount of efforts has been expended to identify markers to

predict PTB and to improve our understanding of the mechanisms and pathways leading to PTB. The best studied site of infection is amniotic fluid, but obtaining this sample requires an invasive and sometimes risky procedure (e.g. amniocentesis). A non-invasive approach seems to be more relevant to clinical practice because of the feasibility and accessibility. Therefore, the overall objective of Inge's study was to determine several inflammatory markers in maternal serum from pregnant women in labour (either term or preterm) vs. non-labouring controls.

Inge conducted a nested case control study in which singleton pregnancies were recruited at the obstetric department of Ghent University Hospital and divided into groups according to gestational age and labour status. The study showed that serum levels of sTRE M-1 were elevated during spontaneous term and preterm labour vs. non-labouring women. In line with previous studies, MMP-9 concentrations were elevated during preterm labour. TIMP-1 and TIMP-2 were lower in preterm gestation, irrespective of labour, while TIMP-4 concentrations were raised in labour. One of the most intriguing findings of the study is that MMP-9:TIMP-1 and MMP-9:TIMP-2 balances in maternal serum were tilting in favour of matrix degradation (gelatinolysis) in women with preterm labour. This observation suggests that aberrant serum expression of MMP:TIMP ratios may provide a far less invasive method to determine enzymes essential in the degradation of extracellular matrix (EC M) during pregnancy and parturition.

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De thesis can be downloaded from the ICRH website at:

http://icrhb.org/sites/default/files/Inge%20Tency_PhDThesis_180x240_Def_Spreads.pdf



Simukai Shamu: 25 November 2013

Simukai Shamu investigated the link between disclosure of HIV status and partner violence during pregnancy in Zimbabwe. He found that HIV-positive women have a higher exposure to partner violence than HIV negative women when they inform their partners about their status. Overall, the link between HIV status and violence is very complex, but among others the level of ender inequality appears to play an important role. Health workers, who could play a preventive role, in general lack the knowledge, means and/or support to identify partner violence and to react on it. Simukai's doctorate is a joint PhD between Ghent University and the University of the Western Cape, where he defended his thesis a

couple of months ago.

The full thesis, entitled 'The dynamics of intimate partner violence (IPV) during pregnancy and linkages with HIV infection and disclosure in Zimbabwe' can be downloaded at <http://icrhb.org/publication/icrh-monographs-phd-defence-simukai-shamu>



Françoise Hamers: 25 November 2013

Françoise Hamers analyzed the data of the European HIV/AIDS surveillance system and found that the prevalence of HIV in the European WHO region results from several distinguished but simultaneous and interconnected HIV epidemics. In Western-Europa, the emergence of combination antiretroviral therapy (cART) in 1996 has led to a weakening attention for prevention and a revival of high risk behavior among man having sex with man, resulting in an increase in new infections. Heterosexual migrants from sub-Sahara Africa have considerably contributed to the HIV epidemic in Europe, but the number of new infections in this population shows a downward trend since 2005, which could be

related to decreasing HIV incidence in Africa. The number of infections through intravenous drug use has decreased gradually since the 1990s. Françoise Hamers' thesis stresses the need for sensitization and information on the benefits of early testing and treatment. Health workers should be better trained in recognizing HIV infections.

The full thesis, entitled 'HIV/AIDS in Europe: The link between surveillance and prevention' can be downloaded at <http://icrhb.org/publication/icrh-monographs-phd-fran%C3%A7oise-hamers-hiv-aids-europe-link-between-surveillance-and>

6.14 ICRH internship program



ICRH launched a research internship program for postgraduates considering a career in reproductive health research. The program aims at exposing junior researchers to the various aspects of research with a focus on themes such as sexually transmitted infections, maternal and child health, sexual violence and family planning. The trainee will be supervised by ICRH's Scientific Director and will be involved together with other researchers in the center's normal research activities including proposal writing, project management, scientific analysis and article writing. The internship consists of a six months stay in Gent, followed by a six months stay in Africa, during which the intern will have the opportunity to experience the implementation of field research in one of ICRH's

sister-organizations in Kenya (ICRH-K) and Mozambique (ICRH-M).

The first intern in this program is Emilomo Ogbe. She started her internship mid-June 2013.

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Publications

1. Articles in journals included in the Science Citation Index, Social Sciences Citation Index and Humanities Index. (A1)

1. Mannava P, Geibel S, King'ola N, Temmerman M, Luchters S. Male sex workers who sell sex to men also engage in anal intercourse with women: evidence from Mombasa, Kenya. PLoS One (2013) 8 (1)

Objective: To investigate self-report of heterosexual anal intercourse among male sex workers who sell sex to men, and to identify the socio-demographic characteristics associated with practice of the behavior. Design: Two cross-sectional surveys of male sex workers who sell sex to men in Mombasa, Kenya. Methods: Male sex workers selling sex to men were invited to participate in surveys undertaken in 2006 and 2008. A structured questionnaire administered by trained interviewers was used to collect information on socio-demographic characteristics, sexual behaviors, HIV and STI knowledge, and health service usage. Data were analyzed through descriptive and inferential statistics. Bivariate logistic regression, after controlling for year of survey, was used to identify socio-demographic characteristics associated with heterosexual anal intercourse. Results: From a sample of 867 male sex workers, 297 men had sex with a woman during the previous 30 days - of whom 45% did so with a female client and 86% with a non-paying female partner. Within these groups, 66% and 43% of male sex workers had anal intercourse with a female client and non-paying partner respectively. Factors associated with reporting recent heterosexual anal intercourse in bivariate logistic regression after controlling for year of survey participation were being Muslim, ever or currently married, living with wife only, living with a female partner only, living with more than one sexual partner, self-identifying as basha/king/bisexual, having one's own children, and lower education. Conclusions: We found unexpectedly high levels of self-reported anal sex with women by male sex workers, including selling sex to female clients as well as with their own partners. Further investigation among women in Mombasa is needed to understand heterosexual anal sex practices, and how HIV programming may respond.

2. Verstraelen H, Roelens K, De Knijf A, Temmerman M. Persistent aching and itching of the clitoris. Archives of Gynecology and Obstetrics (2013) 288 (1): 233-234

Letter to the editor.

3. Decat P, Nelson E, De Meyer S, Jaruseviciene L, Orozco M, Segura Z, Gorter A, Vega B, Cordova K, Maes L et al. Community embedded reproductive health interventions for adolescents in Latin America: development and evaluation of a complex multi-centre intervention. BMC Public Health (2013) 13

Background: Adolescents in Latin America are at high risk for unwanted and unplanned pregnancies, which often result in unsafe abortions or poor maternal health outcomes. Both young men and women in the region face an increased risk of sexually transmitted infections due to inadequate sexual and reproductive health information, services and counselling. To date, many adolescent health programmes have targeted a single determinant of sexual and reproductive health. However, recent evidence suggests that the complexity of sexual and reproductive health issues demands an equally multi-layered and comprehensive approach. Methods : This article describes the development, implementation and evaluation design of the community-embedded reproductive health care for adolescents (CERCA) study in three Latin American cities: Cochabamba (Bolivia), Cuenca (Ecuador) and Managua (Nicaragua). Project CERCA's research methodology builds on existing methodological frameworks, namely: action research, community based participatory research and intervention-mapping. The interventions in each country address distinct target groups (adolescents, parents, local authorities and health providers) and seek improvement of the following sexual health behaviours: communication about sexuality, sexual and reproductive health information-seeking, access to sexual and reproductive health care and safe sexual relationships. In Managua, we implemented a randomised controlled study, and in Cochabamba and Cuenca we adopted a non-randomised

controlled study to evaluate the effectiveness of Project CERCA interventions, in addition to a process evaluation. Discussion : This research will result in a methodological framework that will contribute to the improved design and implementation of future adolescent sexual and reproductive health interventions.

4. Shamu S, Abrahams N, Temmerman M, Zarowsky C. Opportunities and obstacles to screening pregnant women for intimate partner violence during antenatal care in Zimbabwe. *Culture, Health & Sexuality* (2013) 15 (5): 511-524

Pregnancy offers an opportunity for midwives to recognise and respond to women experiencing intimate partner violence (IPV). However, most antenatal care interventions have been conducted in private specialist services in high-income countries and do not address the structural and cultural realities of developing country settings. We report on an exploratory qualitative study conducted in antenatal public health facilities in Harare, Zimbabwe, involving six in-depth interviews with midwives and seven FGDs with 64 pregnant and postpartum women. Recorded interviews were transcribed verbatim and analysed using thematic content analysis. We found that identifying and responding to IPV in antenatal care is hampered by inadequate human, financial and infrastructural resources as well as poor support of gender-based violence training for midwives. Midwives had divergent views of their role, with some perceiving IPV as a non-clinical, social and domestic problem that does not require their attention, while others who had been sensitised to the problem felt that it could easily overwhelm them. A comprehensive response to IPV by midwives would be difficult to achieve in this setting but sensitised midwives could respond to cues to violence and ultimately assist abused women in culturally sensitive and appropriate ways.

5. Beauclair R, Meng F, Deprez N, Temmerman M, Welte A, Hens N, Delva W. Evaluating audio computer assisted self-interviews in urban south African communities: evidence for good suitability and reduced social desirability bias of a cross-sectional survey on sexual behavior. *BMC Medical Research Methodology* (2013) 13

Background: Efficient HIV prevention requires accurate identification of individuals with risky sexual behaviour. However, self-reported data from sexual behaviour surveys are prone to social desirability bias (SDB). Audio Computer-Assisted Self-Interviewing (ACASI) has been suggested as an alternative to face-to-face interviewing (FTFI), because it may promote interview privacy and reduce SDB. However, little is known about the suitability and accuracy of ACASI in urban communities with high HIV prevalence in South Africa. To test this, we conducted a sexual behaviour survey in Cape Town, South Africa, using ACASI methods. Methods: Participants (n = 878) answered questions about their sexual relationships on a touch screen computer in a private mobile office. We included questions at the end of the ACASI survey that were used to assess participants' perceived ease of use, privacy, and truthfulness. Univariate logistic regression models, supported by multivariate models, were applied to identify groups of people who had adverse interviewing experiences. Further, we constructed male–female ratios of self-reported sexual behaviours as indicators of SDB. We used these indicators to compare SDB in our survey and in recent FTFI-based Demographic and Health Surveys (DHSs) from Lesotho, Swaziland, and Zimbabwe. Results: Most participants found our methods easy to use (85.9%), perceived privacy (96.3%) and preferred ACASI to other modes of inquiry (82.5%) when reporting on sexual behaviours. Unemployed participants and those in the 40–70 year old age group were the least likely to find our methods easy to use (OR 0.69; 95% CI: 0.47–1.01 and OR 0.37; 95% CI: 0.23–0.58, respectively). In our survey, the male–female ratio for reporting >2 sexual partners in the past year, a concurrent relationship in the past year, and > 2 sexual partners in a lifetime was 3.4, 2.6, and 1.2, respectively— far lower than the ratios observed in the Demographic and Health Surveys. Conclusions: Our analysis suggests that most participants in our survey found the ACASI modality to be acceptable, private, and user-friendly. Moreover, our results indicate lower SDB than in FTFI techniques. Targeting older and unemployed participants for ACASI training prior to taking the survey may help to improve their perception of ease and privacy.

6. Temmerman M. Bridging science, policies and politics in sexual and reproductive health and rights. *American Journal of Reproductive Immunology* (2013) 69 (2): 99

Letter to the editor.

7. Tency I, Verstraelen H, Saerens B, Verhasselt B, Vanechoutte M, Degomme O, Verhelst R, Temmerman M. Elevated soluble triggering receptor expressed on myeloid cells (sTREM)-1 levels in maternal serum during term and preterm labor..PloS One (2013) 8: 2

Background: Infection and inflammation are important mechanisms leading to preterm birth. Soluble triggering receptor expressed on myeloid cells-1 (sTREM-1) belongs to a family of cell surface receptors that seems to play an important role in fine-tuning the immune response. It has been demonstrated that sTREM-1 is involved in bacterial infection as well as in noninfectious inflammatory conditions. Few studies have investigated serum sTREM-1 expression during preterm labor. Therefore, the purpose of this study was to assess sTREM-1 concentrations in maternal serum during term and preterm labor. Methods: This case control study included 176 singleton pregnancies in the following groups: patients in (1) preterm labor, delivered before 34 weeks (PTB) (n = 52); (2) GA matched controls, not in labor, matched for gestational age (GA) with the PTB group (n = 52); (3) at term in labor (n = 40) and (4) at term not in labor (n = 32). sTREM-1 concentrations were determined by enzyme-linked immunoassay. Results: sTREM-1 was detected in all serum samples. Median sTREM-1 concentrations were significantly higher in women with PTB vs. GA matched controls (367 pg/ml, interquartile range (IQR) 304-483 vs. 273 pg/ml, IQR 208-334; $P < 0.001$) and in women at term in labor vs. at term not in labor (300 pg/ml, IQR 239-353 vs. 228 pg/ml, IQR 174-285; $P < 0.001$). Women with PTB had significantly higher levels of sTREM-1 compared to women at term in labor ($P = 0.004$). Multiple regression analysis, with groups recoded as three key covariates (labor, preterm and rupture of the membranes), showed significantly higher sTREM-1 concentrations for labor (+30%, $P < 0.001$) and preterm (+15%, $P = 0.005$) after adjusting for educational level, history of PTB and sample age. Conclusions: sTREM-1 concentrations in maternal serum were elevated during spontaneous term and preterm labor and sTREM-1 levels were significantly higher in preterm labor.

8. van den Aamele S, Keygnaert I, Rachidi A, Roelens K, Temmerman M. The role of the healthcare sector in the prevention of sexual violence against sub-Saharan transmigrants in Morocco: a study of knowledge, attitudes and practices of healthcare workers. BMC Health Services (2013) 13

Background: Sub-Saharan transmigrants in Morocco are extremely vulnerable to sexual violence. From a public health perspective, the healthcare system is globally considered an important partner in the prevention of sexual violence. The aim of this study is twofold. In a first phase, we aimed to identify the current role and position of the Moroccan healthcare sector in the prevention of sexual violence against sub-Saharan transmigrants. In a second phase, we wanted these results and available guidelines to be the topic of a participatory process with local stakeholders in order to formulate recommendations for a more desirable prevention of sexual violence against sub-Saharan transmigrants by the Moroccan healthcare sector. Methods: Knowledge, attitudes and practices of healthcare workers in Morocco concerning sexual violence against sub-Saharan transmigrants and its prevention were firstly explored in semi-structured interviews after which they were discussed in a participatory process resulting in the formulation of recommendations. Results: All participants (n=24) acknowledged the need for desirable prevention of sexual violence against transmigrants. Furthermore, important barriers in tertiary prevention practices, i.e. psychosocial and judicial referral and long-term follow-up, and in secondary prevention attitudes, i.e. active identification of victims were identified. Moreover, existing services for Moroccan victims of sexual violence currently do not address the sub-Saharan population. Thus, transmigrants are bound to rely on the aid of civil society. Conclusions: This research demonstrates the low accessibility of existing Moroccan services for sub-Saharan migrants. In particular, there is an absence of prevention initiatives addressing sexual violence against the sub-Saharan transmigrant population. Although healthcare workers do wish to develop prevention initiatives, they are dealing with structural difficulties and a lack of expertise. Recommendations adapted to the context of sub-Saharan transmigrants in Morocco are suggested.

9. Richter R, Chersich M, Temmerman M, Luchters S. Characteristics, sexual behaviour and risk factors of female, male and transgender sex workers in South Africa. South African Medical Journal (2013) 103 (4): 246-251

Background. In South Africa, information on sex workers' characteristics, sexual behaviour and health needs is limited. Current social, legal and institutional factors impede a safe working environment for sex workers and their clients. Objectives. To describe characteristics and sexual behaviour of female, male and transgender sex workers,

and assess their risk factors for unprotected sex. Methods. Repeat cross-sectional surveys among sex workers were conducted in Hillbrow, Sandton, Rustenburg and Cape Town in 2010. Sex workers were interviewed once; any re-interviews were excluded from analysis. Unprotected sex was defined as any unprotected penetrative vaginal or anal sex with last two clients. Results. Trained sex worker-research assistants interviewed 1 799 sex workers. Sex work was a full-time profession for most participants. About 8% (126/1 594) of women, 33% (22/75) of men, and 25% (12/50) of transgender people had unprotected sex. A quarter of anal sex was unprotected. Unprotected sex was 2.1 times (adjusted odds ratio (AOR), 95% CI 1.2 - 3.7; $p=0.011$) more likely in participants reporting daily or weekly binge drinking than non-binge drinkers. Male sex workers were 2.9 times (AOR, 95% CI 1.6 - 5.3; $p<0.001$) more likely, and transgender people 2.4 times (AOR, 95% CI 1.1 - 4.9; $p=0.021$) more likely, than females to have unprotected sex. Sex workers in Hillbrow, where the only sex work-specific clinic was operational, were less likely to have unprotected sex than those in other sites. Conclusion. Tailored sex work interventions should explicitly include male and transgender sex workers, sex work-specific clinics, focus on the risks of unprotected anal sex, and include interventions to reduce harm caused by alcohol abuse.

10. Tilahun T, Degfie G, Coene G, Luchter S, Kassahun W, Leye E, Temmerman M, Olivier Degomme O. Family planning knowledge, attitude and practice among married couples in Jimma Zone, Ethiopia. PLoS One (2013) 8 (4)

Background: Understanding why people do not use family planning is critical to address unmet needs and to increase contraceptive use. According to the Ethiopian Demographic and Health Survey 2011, most women and men had knowledge on some family planning methods but only about 29% of married women were using contraceptives. 20% women had an unmet need for family planning. We examined knowledge, attitudes and contraceptive practice as well as factors related to contraceptive use in Jimma zone, Ethiopia. Methods: Data were collected from March to May 2010 among 854 married couples using a multi-stage sampling design. Quantitative data based on semi-structured questionnaires was triangulated with qualitative data collected during focus group discussions. We compared proportions and performed logistic regression analysis. Result: The concept of family planning was well known in the studied population. Sex-stratified analysis showed pills and injectables were commonly known by both sexes, while long-term contraceptive methods were better known by women, and traditional methods as well as emergency contraception by men. Formal education was the most important factor associated with better knowledge about contraceptive methods (aOR = 2.07, $p<0.001$), in particular among women (aOR(women) = 2.77 vs. aOR(men) = 1.49; $p<0.001$). In general only 4 out of 811 men ever used contraception, while 64% and 43% females ever used and were currently using contraception respectively. Conclusion: The high knowledge on contraceptives did not match with the high contraceptive practice in the study area. The study demonstrates that mere physical access (proximity to clinics for family planning) and awareness of contraceptives are not sufficient to ensure that contraceptive needs are met. Thus, projects aiming at increasing contraceptive use should contemplate and establish better counseling about contraceptive side effects and method switch. Furthermore in all family planning activities both wives' and husbands' participation should be considered.

11. Delva W, Meng F, Beauclair R, Deprez N, Temmerman M, Welte A, Hens N. Coital frequency and condom use in monogamous and concurrent sexual relationships in Cape Town, South Africa. Journal of the International AIDS Society (2013) 16

Introduction: A decreased frequency of unprotected sex during episodes of concurrent relationships may dramatically reduce the role of concurrency in accelerating the spread of HIV. Such a decrease could be the result of coital dilution - the reduction in per-partner coital frequency from additional partners - and/or increased condom use during concurrency. To study the effect of concurrency on the frequency of unprotected sex, we examined sexual behaviour data from three communities with high HIV prevalence around Cape Town, South Africa. Methods: We conducted a cross-sectional survey from June 2011 to February 2012 using audio computer-assisted self-interviewing to reconstruct one-year sexual histories, with a focus on coital frequency and condom use. Participants were randomly sampled from a previous TB and HIV prevalence survey. Mixed effects logistic and Poisson regression models were fitted to data from 527 sexually active adults reporting on 1210 relationship episodes to evaluate the effect of concurrency status on consistent condom use and coital frequency. Results: The

median of the per-partner weekly average coital frequency was 2 (IQR: 1 - 3), and consistent condom use was reported for 36% of the relationship episodes. Neither per-partner coital frequency nor consistent condom use changed significantly during episodes of concurrency (aIRR = 1.05; 95% confidence interval (CI): 0.99-1.24 and aOR = 1.01; 95% CI: 0.38-2.68, respectively). Being male, coloured, having a tertiary education, and having a relationship between 2 weeks and 9 months were associated with higher coital frequencies. Being coloured, and having a relationship lasting for more than 9 months, was associated with inconsistent condom use. Conclusions: We found no evidence for coital dilution or for increased condom use during concurrent relationship episodes in three communities around Cape Town with high HIV prevalence. Given the low levels of self-reported consistent condom use, our findings suggest that if the frequency of unprotected sex with each of the sexual partners is sustained during concurrent relationships, HIV-positive individuals with concurrent partners may disproportionately contribute to onward HIV transmission.

12. Duysburgh E, Zhang W-H, Ye M, Williams A, Massawe S, Sie A, Williams J, Mpembeni R, Loukanova S, Temmerman M. Quality of antenatal and childbirth care in selected rural health facilities in Burkina Faso, Ghana and Tanzania: similar finding. *Tropical Medicine & International Health* (2013) 18 (5): 534-547

Objectives : To measure pre-intervention quality of routine antenatal and childbirth care in rural districts of Burkina Faso, Ghana and Tanzania and to identify shortcomings. Methods : In each country, we selected two adjoining rural districts. Within each district, we randomly sampled 6 primary healthcare facilities. Quality of care was assessed through health facility surveys, direct observation of antenatal and childbirth care, exit interviews and review of patient records. Results : By and large, quality of antenatal and childbirth care in the six districts was satisfactory, but we did identify some critical gaps common to the study sites in all three countries. Counselling and health education practices are poor; laboratory investigations are often not performed; examination and monitoring of mother and newborn during childbirth are inadequate; partographs are not used. Equipment required to provide assisted vaginal deliveries (vacuum extractor or forceps) was absent in all surveyed facilities. Conclusion : Quality of care in the three study sites can be improved with the available human resources and without major investments. This improvement could reduce maternal and neonatal mortality and morbidity.

13. Jaruseviciene L, Orozco M, Ibarra M, Cordova Ossio F, Vega BJ, Auquilla N, Medina J, Gorter AC, Decat P, De Meyer S et al. Primary healthcare providers' views on improving sexual and reproductive healthcare for adolescents in Bolivia, Ecuador and Nicaragua. *Global Health Action* (2013) 6: 1-8

Objectives: To elicit the views of primary healthcare providers from Bolivia, Ecuador, and Nicaragua on how adolescent sexual and reproductive health (ASRH) care in their communities can be improved. Methods: Overall, 126 healthcare providers (46 from Bolivia, 39 from Ecuador, and 41 from Nicaragua) took part in this qualitative study. During a series of moderated discussions, they provided written opinions about the accessibility and appropriateness of ASRH services and suggestions for its improvement. The data were analyzed by employing a content analysis methodology. Results: Study participants emphasized managerial issues such as the prioritization of adolescents as a patient group and increased healthcare providers' awareness about adolescent-friendly approaches. They noted that such an approach needs to be extended beyond primary healthcare centers. Schools, parents, and the community in general should be encouraged to integrate issues related to ASRH in the everyday life of adolescents and become 'gate-openers' to ASRH services. To ensure the success of such measures, action at the policy level would be required. For example, decision-makers could call for developing clinical guidelines for this population group and coordinate multisectoral efforts. Conclusions: To improve ASRH services within primary healthcare institutions in three Latin American countries, primary healthcare providers call for focusing on improving the youth-friendliness of health settings. To facilitate this, they suggested engaging with key stakeholders, such as parents, schools, and decision-makers at the policy level.

14. Merckx M, Wildero-Van Wouwe L, Arbyn M, Meys J, Weyers S, Temmerman M, Vanden Broeck D. Transmission of carcinogenic human papillomavirus types from mother to child: a meta-analysis of published studies. *European Journal of Cancer Prevention* (2013) 22 (3): 277-285

Currently, human papillomavirus (HPV) research focuses on HPV infection in adults and sexual transmission. Data on HPV infection in children are slowly becoming available. It is a matter of debate whether mother-to-child transmission of HPV is an important infection route and whether children born to HPV-positive mothers are at a higher risk of HPV infection compared with children born to HPV-negative mothers. The objective of this meta-analysis is to summarize the published literature on the extent to which genital HPV infection is vertically transmitted from mother to child. Medline, Web of Science, and CINAHL were searched for eligible reports published before January 2011. Differences in the risk of HPV infection between newborns from HPV-positive and HPV-negative mothers were pooled using a random-effects model. Twenty eligible studies, including 3128 women/children pairs, fulfilled the selection criteria. High heterogeneity could be found ($I^2 = 96\%$). The overall estimated risk difference was 33% (95% confidence interval: 22–44%). On restricting to high-risk HPV-positive mothers only ($n = 4$; women = 231), the difference in risk was 45% (95% confidence interval: 33–56%). The heterogeneity was found to be low ($I^2 = 15\%$). This meta-analysis indicates a significantly higher risk for children born to HPV-positive mothers to become HPV positive themselves. Plausible explanations include vertical transmission of HPV during pregnancy and/or birth or a higher infection rate during early nursing from mother to child. More research is required to gain an insight into the precise mode of transmission and the clinical effects of infection on the child.

15. Olivier L, Urban U, Chersich M, Temmerman M, Viljoen D. Burden of fetal alcohol syndrome in a rural West Coast area of South Africa. *South African Medical Journal* (2013) 103 (6): 402-405

Background. Fetal alcohol syndrome (FAS) is common in parts of South Africa; rural residence is a frequently cited risk factor. We conducted a FAS school prevalence survey of an isolated rural community in a West Coast village of Western Cape Province, so obtaining the first directly measured rate, focusing specifically on a South African rural area, of FAS and partial FAS (PFAS). **Methods.** The study area (Aurora village), a community of about 2 500 people in a grain-producing region, has one primary school. All learners were eligible for study inclusion. Initial anthropometry screening was followed by a diagnostic stage entailing examination by a dysmorphologist for features of FAS, neurodevelopmental assessment, and an interview assessing maternal alcohol consumption. **Results.** Of 160 learners screened, 78 (49%) were screen-positive, of whom 63 (81%) were clinically assessed for FAS. The overall FAS/PFAS rate among the screened learners was 17.5% (95% confidence interval 12.0 - 24.2%), with 16 (10.0%) children having FAS and 12 (7.5%) PFAS. High rates of stunting, underweight and microcephaly were noted in all learners, especially those with FAS or PFAS. Five (18%) mothers of affected children were deceased by the time of assessment. **Conclusion.** We describe very high rates of FAS/PFAS in an isolated rural part of the Western Cape that is not located in a viticultural region. Our study suggests that the prevalence of FAS may be very high in isolated communities, or in particular hot-spots. It adds to the growing evidence that FAS/PFAS is a significant, and underestimated, health problem in South Africa. Expanded screening and surveillance programmes, and preventive interventions, are urgently needed.

16. Shamu S, Abrahams N, Zarowsky C, Shefer T, Temmerman M. Intimate partner violence during pregnancy in Zimbabwe: a cross-sectional study of prevalence, predictors and associations with HIV. *Tropical Medicine & International Health* (2013) 18 (6): 696-711

OBJECTIVE: To describe the occurrence, dynamics and predictors of intimate partner violence (IPV) during pregnancy, including links with HIV, in urban Zimbabwe. **METHODS:** A cross-sectional survey of 2042 post-natal women aged 15-49 years was conducted in six public primary healthcare clinics in low-income urban Zimbabwe. An adapted WHO questionnaire was used to measure IPV. Multivariate logistic regression was used to assess factors associated with IPV and severe (six or more episodes) IPV during pregnancy. **RESULTS:** 63.1% of respondents reported physical, emotional and/or sexual IPV during pregnancy: 46.2% reported physical and/or sexual violence, 38.9% sexual violence, 15.9% physical violence and 10% reported severe violence during pregnancy. Physical violence was less common during pregnancy than during the last 12 months before pregnancy (15.9% [95% CI 14.3-17.5] vs. 21.3% [95% confidence interval 19.5-23.1]). Reported rates of emotional (40.3% [95% CI 38.1-42.3] vs. 44.0% [95% CI 41.8-46.1]) and sexual violence (35.6% [95% CI 33.5-37.7] vs. 38.9% [95% CI 36.8-41.0]) were high during and before pregnancy. Associated factors were having a younger male partner, gender inequities, past

abuse, problem drinking, partner control of woman's reproductive health and risky sexual practices. HIV status was not associated with either IPV or severe IPV, but reporting a partner with a known HIV status was associated with a lower likelihood of severe abuse. **CONCLUSION:** The rates of IPV during pregnancy in Zimbabwe are among the highest ever reported globally. Primary prevention of violence during childhood through adolescence is urgently needed. Antenatal care may provide an opportunity for secondary prevention but this requires further work. The relationship between IPV and HIV is complex in contexts where both are endemic.

17. Zhang X, Temmerman M, Li Y, Luo W, Luchters S. Vulnerabilities, health needs and predictors of high-risk sexual behaviour among female adolescent sex workers in Kunming, China. *Sexually Transmitted Infections* (2013) 89 (3): 237-244

Objectives : This study assessed social and behavioural predictors for sexual risk taking and sexually transmitted infections (STIs) including HIV among adolescent female sex workers (FSWs) from Kunming, China. Additionally, health services needs and use were assessed. **Methods :** A cross-sectional survey was conducted in 2010. Using snowball and convenience sampling, self-identified FSWs were recruited from four urban areas in Kunming. Women consenting to participate were administered a semi-structured questionnaire by trained interviewers identified from local peer-support organisations. Following interview, a gynaecological examination and biological sampling to identify potential STIs were undertaken. Descriptive and multivariable logistic regression analyses were performed. **Results :** Adolescent FSWs had a mean age of 18.2 years and reported numerous non-paying sexual partners with very low rate of consistent condom use (22.2%). Half (50.3%) the respondents had sex while feeling drunk at least once in the past week, of whom 56.4% did not use condom protection. STI prevalence was high overall (30.4%) among this group. Younger age, early sexual debut, being isolated from schools and family, short duration in sex work, and use of illicit drugs were found to be strong predictors for unprotected sex and presence of an STI. Conversely, having access to condom promotion, free HIV counselling and testing, and peer education were associated with less unprotected sex. The majority reported a need for health knowledge, free condoms and low-cost STI diagnosis and treatment. **Conclusions :** There is an urgent need to improve coverage, accessibility and efficiency of existing interventions targeting adolescent FSWs.

18. Geelhoed D, Lafort Y, Chissale E, Candrinho B, Degomme O. Integrated maternal and child health services in Mozambique: structural health system limitations overshadow its effect on follow-up of HIV-exposed infants. *BMC Health Services Research* (2013) 13

Background: The follow-up of HIV-exposed infants remains a public health challenge in many Sub-Saharan countries. Just as integrated antenatal and maternity services have contributed to improved care for HIV-positive pregnant women, so too could integrated care for mother and infant after birth improve follow-up of HIV-exposed infants. We present results of a study testing the viability of such integrated care, and its effects on follow-up of HIV-exposed infants, in Tete Province, Mozambique. **Methods:** Between April 2009 and September 2010, we conducted a mixed-method, intervention-control study in six rural public primary healthcare facilities, selected purposively for size and accessibility, with random allocation of three facilities each for intervention and control groups. The intervention consisted of a reorganization of services to provide one-stop, integrated care for mothers and their children under five years of age. We collected monthly routine facility statistics on prevention of mother-to-child HIV transmission (PMTCT), follow-up of HIV-exposed infants, and other mother and child health (MCH) activities for the six months before (January-June 2009) and 13 months after starting the intervention (July 2009-July 2010). Staff were interviewed at the start, after six months, and at the end of the study. Quantitative data were analysed using quasi-Poisson models for significant differences between the periods before and after intervention, between healthcare facilities in intervention and control groups, and for time trends. The coefficients for the effect of the period and the interaction effect of the intervention were calculated with their p-values. Thematic analysis of qualitative data was done manually. **Results:** One-stop, integrated care for mother and child was feasible in all participating healthcare facilities, and staff evaluated this service organisation positively. We observed in both study groups an improvement in follow-up of HIV-exposed infants (registration, follow-up visits, serological testing), but frequent absenteeism of staff and irregular supply of consumables interfered with healthcare facility performance for both intervention and control groups. **Conclusions:** Despite improvement in various aspects of the

follow-up of HIV-exposed infants, we observed no improvement attributable to one-stop, integrated MCH care. Structural healthcare system limitations, such as staff absences and irregular supply of essential commodities, appear to overshadow its potential effects. Regular technical support and adequate basic working conditions are essential for improved performance in the follow-up of HIV-exposed infants in peripheral public healthcare facilities in Mozambique.

19. Li J, Temmerman M, Chen Q, Xu J, Zhang W-H. A review of contraceptive practices among married and unmarried women in China from 1982 to 2010. *European Journal of Contraception and Reproductive Health* (2013) 18 (3): 148-158

Objective : To analyse the contraceptive prevalence rate (CPR) among – and contraceptive methods used by – married and unmarried women in China, from 1982 to 2010. Method : Data concerning married women were collected from national surveys conducted by the Chinese government. Those pertaining to unmarried women were obtained by searching the China Academic Journal Network Publishing database and PubMed. Results : CPR among married women in China was 89% in 2010, the highest in the world. Most married women use long-acting reversible contraceptives, particularly intrauterine devices, and sterilisation. CPR among sexually active unmarried women has fluctuated between 17 and 70% since 1988, although the frequency of condom use has increased (Cochran-Armitage trend test, $\chi^2 = 126.1$, $p < 0.001$). More than 25% of unmarried women rely since at least 1982 on less effective contraceptive methods, including rhythm and withdrawal. This has led to an annual induced abortion rate of approximately 20% among those women. Conclusion : In sharp contrast to the high CPR among married women, the rate among sexually active unmarried women in China has remained extremely low since 1988. More efforts should be directed at raising contraception awareness among this population to improve their reproductive health and reduce the rate of unwanted pregnancy.

20. Scorgie F, Vasey K, Harper E, Richter M, Nare P, Maseko S, Chersich M. Human rights abuses and collective resilience among sex workers in four African countries: a qualitative study. *Global Health* (2013) 9 (1): 33

Background: Sex work is a criminal offence, virtually throughout Africa. This criminalisation and the intense stigma attached to the profession shapes interactions between sex workers and their clients, family, fellow community members, and societal structures such as the police and social services. Methods: We explore the impact of violence and related human rights abuses on the lives of sex workers, and how they have responded to these conditions, as individuals and within small collectives. These analyses are based on data from 55 in-depth interviews and 12 focus group discussions with female, male and transgender sex workers in Kenya, South Africa, Uganda and Zimbabwe. Data were collected by sex worker outreach workers trained to conduct qualitative research among their peers. Results: In describing their experiences of unlawful arrests and detention, violence, extortion, vilification and exclusions, participants present a picture of profound exploitation and repeated human rights violations. This situation has had an extreme impact on the physical, mental and social wellbeing of this population. Overall, the article details the multiple effects of sex work criminalisation on the everyday lives of sex workers and on their social interactions and relationships. Underlying their stories, however, are narratives of resilience and resistance. Sex workers in our study draw on their own individual survival strategies and informal forms of support and very occasionally opt to seek recourse through formal channels. They generally recognize the benefits of unified actions in assisting them to counter risks in their environment and mobilise against human rights violations, but note how the fluctuant and stigmatised nature of their profession often undermines collective action. Conclusions: While criminal laws urgently need reform, supporting sex work self-organisation and community-building are key interim strategies for safeguarding sex workers' human rights and improving health outcomes in these communities. If developed at sufficient scale and intensity, sex work organisations could play a critical role in reducing the present harms caused by criminalisation and stigma.

21. Luchters S, Richter M, Bosire W, Nelson G, Kingola N, Xu-Dong Z, Temmerman M, Chersich M. The contribution of emotional partners to sexual risk taking and violence among female sex workers in Mombasa, Kenya: a cohort study. *PLoS One* 8 (8)

Objectives: To assess sexual risk-taking of female sex workers (FSWs) with emotional partners (boyfriends and husbands), compared to regular and casual clients. Experiences of violence and the degree of relationship control that FSWs have with emotional partners are also described. **Design:** Cohort study with quarterly follow-up visit over 12-months. **Methods:** Four hundred HIV-uninfected FSWs older than 16 years were recruited from their homes and guesthouses in Mombasa, Kenya. A structured questionnaire assessed participant characteristics and study outcomes at each visit, and women received risk-reduction counselling, male and female condoms, and HIV testing. **Results:** Four or more unprotected sex acts in the past week were reported by 21.3% of women during sex with emotional partners, compared to 5.8% with regular and 4.8% with casual clients ($P<0.001$). Total number of unprotected sex acts per week was 5-6-fold higher with emotional partners (603 acts with 259 partners) than with regular or casual clients (125 acts with 456, and 98 acts with 632 clients, respectively; $P<0.001$). Mostly, perceptions of 'trust' underscored unprotected sex with emotional partners. Low control over these relationships, common to many women (36.9%), was linked with higher partner numbers, inconsistent condom use, and being physically forced to have sex by their emotional partners. Half experienced sexual or physical violence in the past year, similarly associated with partner numbers and inconsistent condom use. **Conclusions:** High-risk sexual behaviour, low control and frequent violence in relationships with emotional partners heighten FSWs' vulnerability and high HIV risk, requiring targeted interventions that also encompass emotional partners.

22. Loquiha O, Hens N, Chavane L, Temmerman M, Aerts M. Modeling heterogeneity for count data: A study of maternal mortality in health facilities in Mozambique. *Biometrical Journal* (2013) 55 (5): 647-660

Count data are very common in health services research, and very commonly the basic Poisson regression model has to be extended in several ways to accommodate several sources of heterogeneity: (i) an excess number of zeros relative to a Poisson distribution, (ii) hierarchical structures, and correlated data, (iii) remaining 'unexplained' sources of overdispersion. In this paper, we propose hierarchical zero-inflated and overdispersed models with independent, correlated, and shared random effects for both components of the mixture model. We show that all different extensions of the Poisson model can be based on the concept of mixture models, and that they can be combined to account for all different sources of heterogeneity. Expressions for the first two moments are derived and discussed. The models are applied to data on maternal deaths and related risk factors within health facilities in Mozambique. The final model shows that the maternal mortality rate mainly depends on the geographical location of the health facility, the percentage of women admitted with HIV and the percentage of referrals from the health facility.

23. Sabbe A, Oulami H, Zekraoui W, Hikmat H, Temmerman M, Leye E. Determinants of child and forced marriage in Morocco: stakeholder perspectives on health, policies and human rights. *BMC International Health and Human Rights* (2013) 13 (1): 43

Background: In Morocco, the social and legal framework surrounding sexual and reproductive health has transformed greatly in the past decade, especially with the introduction of the new Family Law or Moudawana. Yet, despite raising the minimum age of marriage for girls and stipulating equal rights in the family, child and forced marriage is widespread. The objective of this research study was to explore perspectives of a broad range of professionals on factors that contribute to the occurrence of child and forced marriage in Morocco. **Methods:** A qualitative approach was used to generate both primary and secondary data for the analysis. Primary data consist of individual semi-structured interviews that were conducted with 22 professionals from various sectors: health, legal, education, NGO's and government. Sources of secondary data include academic papers, government and NGO reports, various legal documents and media reports. Data were analyzed using thematic qualitative analysis. **Results:** Four major themes arose from the data, indicating that the following elements contribute to child and forced marriage: (1) the legal and social divergence in conceptualizing forced and child marriage; (2) the impact of legislation; (3) the role of education; and (4) the economic factor. Emphasis was especially placed on the new Family Code or Moudawana as having the greatest influence on advancement of women's rights in the sphere of marriage. However, participants pointed out that embedded patriarchal attitudes and behaviours limit its effectiveness. **Conclusion:** The study provided a comprehensive understanding of the factors that compound the problem of child and forced marriage in Morocco. From the viewpoint of professionals, who are closely involved in

tackling the issue, policy measures and the law have the greatest potential to bring child and forced marriage to a halt. However, the implementation of new legal tools is facing barriers and resistance. Additionally, the legal and policy framework should go hand in hand with both education and increased economic opportunities. Education and awareness-raising of all ages is considered essential, seeing that parents and the extended family play a huge role in marrying off girls and young women.

24. De Wilde K, Trommelmans L, Laevens H, Maes L, Temmerman M, Boudrez H. Smoking patterns, depression, and sociodemographic variables among Flemish women during pregnancy and the postpartum period. *Nursing Research* (2013) 62 (6): 394-404

Background: Relationships among feelings of depression, smoking behavior, and educational level during pregnancy have been documented. Feelings of depression may contribute to persistent smoking during pregnancy. No longitudinal studies assessing feelings of depression in women with different antepartum and postpartum smoking patterns are available. Objectives: The aim was to determine relationships between depressive symptoms, sociodemographic characteristics, and smoking pattern during and after pregnancy. Methods: An observational, prospective, noninterventive study was conducted. Data were collected during two stages of pregnancy (T0: < 16 weeks and T1: 32-34 weeks) and postpartum (T2: > 6 weeks) in 523 Flemish women. Feelings of depression (measured using the Beck Depression Inventory [BDI]), smoking behavior, and sociodemographic variables were analyzed using a general linear mixed model implemented in SAS Proc MIXED. Results: Smokers and initial smokers reported significantly more depressive symptoms at all time points compared with recent ex-smokers, nonsmokers, and initial nonsmokers ($p < .001$). The three-way interaction among time point, smoking pattern, and educational level was significant ($p = .02$). Evolution of mean BDI over time differed by educational level. Among participants with a secondary school certificate or less, differences were observed between smokers and nonsmokers, recent ex-smokers and initial nonsmokers, and nonsmokers and initial nonsmokers. Among participants with a college or university degree, no differences were observed. Discussion: A wide variety of smoking patterns were observed during pregnancy and early postpartum. Smoking patterns were associated with depression and showed complex interactions with educational level. Assessment and intervention for both smoking and depression are needed throughout the perinatal period to support the health of mothers, their infants, and families.

25. Sartorius B, Chersich M, Mwaura M, Meda N, Temmerman M, Newell M, Farley T, Luchters S; Kesho Bora Study Group. Maternal anaemia and duration of zidovudine in antiretroviral regimens for preventing mother-to-child transmission: a randomized trial in three African countries. *BMC Infectious Diseases* (2013) 13: 522

Background: Although substantiated by little evidence, concerns about zidovudine-related anaemia in pregnancy have influenced antiretroviral (ARV) regimen choice for preventing mother-to-child transmission of HIV-1, especially in settings where anaemia is common. Methods: Eligible HIV-infected pregnant women in Burkina Faso, Kenya and South Africa were followed from 28 weeks of pregnancy until 12–24 months after delivery ($n = 1070$). Women with a CD4 count of 200-500 cells/mm³ and gestational age 28–36 weeks were randomly assigned to zidovudine-containing triple-ARV prophylaxis continued during breastfeeding up to 6-months, or to zidovudine during pregnancy plus single-dose nevirapine (sd-NVP) at labour. Additionally, two cohorts were established, women with CD4 counts: <200 cells/mm³ initiated antiretroviral therapy, and >500 cells/mm³ received zidovudine during pregnancy plus sd-NVP at labour. Mild (haemoglobin 8.0-10.9 g/dl) and severe anaemia (haemoglobin < 8.0 g/dl) occurrence were assessed across study arms, using Kaplan-Meier and multivariable Cox proportional hazards models. Results: At enrolment (corresponded to a median 32 weeks gestation), median haemoglobin was 10.3 g/dl (IQR = 9.2-11.1). Severe anaemia occurred subsequently in 194 (18.1%) women, mostly in those with low baseline haemoglobin, lowest socio-economic category, advanced HIV disease, prolonged breastfeeding (≥ 6 months) and shorter ARV exposure. Severe anaemia incidence was similar in the randomized arms (equivalence P-value = 0.32). After 1–2 months of ARV's, severe anaemia was significantly reduced in all groups, though remained highest in the low CD4 cohort. Conclusions: Severe anaemia occurs at a similar rate in women receiving longer triple zidovudine-containing regimens or shorter prophylaxis. Pregnant women with pre-existing anaemia and advanced HIV disease require close monitoring.

26. Beauclair R, Delva W. Is Younger Really Safer? A Qualitative Study of Perceived Risks and Benefits of Age-Disparate Relationships among Women in Cape Town, South Africa. PLoS One (2013) 8 (11)

Young women in age-asymmetric relationships may be at an elevated risk for acquisition of HIV, since relationships with older men are also correlated with other risk behaviors like less condom use. Qualitative studies have shown that women are motivated to participate in these relationships for money and emotional support. However, there is a paucity of research on women's perceived risks of these relationships, particularly in South Africa. To this end, we conducted in-depth interviews with 23 women recruited from three urban communities in Cape Town. A thematic question guide was used to direct the interviews. Thematic content analysis was used to explore women's perceived risks of age-disparate and non-age-disparate relationships, the benefits of dating older men, and risk perceptions that influence decisions around beginning or ending a relationship. A plurality of women thought that dating an older man does not bring any adverse consequences, although some thought that older men do not use condoms and may be involved in concurrent partnerships. Many women were less inclined to date same-age or younger men, because they were viewed as being disrespectful and abusive. This study points to the need for more awareness raising about the risks of age-disparate relationships. In addition to these initiatives, there is an urgent need to implement holistic approaches to relationship health, in order to curb intimate partner violence, improve gender equity and make non-age-disparate relationships more attractive.

27. Duysburgh E, Ye M, Williams A, Massawe S, Sié A, Williams J, Mpembeni R, Loukanova S, Temmerman M. Counselling on and women's awareness of pregnancy danger signs in selected rural health facilities in Burkina Faso, Ghana and Tanzania. Tropical Medicine & International Health (2013) 18 (12): 1498–1509

Objective: The aims of this study were to (i) assess healthcare workers' counselling practices concerning danger signs during antenatal consultations in rural primary healthcare (PHC) facilities in Burkina Faso, Ghana and Tanzania; to (ii) assess pregnant women's awareness of these danger signs; and (iii) to identify factors affecting counselling practices and women's awareness. Methods: Cross-sectional study in rural PHC facilities in Burkina Faso, Ghana and Tanzania. In each country, 12 facilities were randomly selected. WHO guidelines were used as standard for good counselling. We assessed providers' counselling practice on seven danger signs through direct observation study (35 observations/facility). Exit interviews (63 interviews/facility) were used to assess women's awareness of the same seven danger signs. We used negative binomial regression to assess associations with health services' and socio-demographic characteristics and to estimate per study site the average number of danger signs on which counselling was provided and the average number of danger signs mentioned by women. Results: About one in three women was not informed of any danger sign. For most danger signs, fewer than half of the women were counselled. Vaginal bleeding and severe abdominal pain were the signs most counselled on (between 52% and 66%). At study facilities in Burkina Faso, 58% of the pregnant women were not able to mention a danger sign, in Ghana this was 22% and in Tanzania 30%. Fever, vaginal bleeding and severe abdominal pain were the danger signs most frequently mentioned. The type of health worker (depending on the training they received) was significantly associated with counselling practices. Depending on the study site, characteristics significantly associated with awareness of signs were women's age, gestational age, gravidity and educational level. Conclusion: Counselling practice is poor and not very efficient. A new approach of informing pregnant women on danger signs is needed. However, as effects of antenatal care education remain largely unknown, it is very well possible that improved counselling will not affect maternal and newborn mortality and morbidity.

28. Chersich M, Luchters S, Ntaganira I, Gerbase A, Lo Y-R, Scorgie F, Steen R. Priority interventions to reduce HIV transmission in sex work settings in sub-Saharan Africa and delivery of these services. Journal of the International AIDS Society (2013) 16 (1): 17980

Introduction: Virtually no African country provides HIV prevention services in sex work settings with an adequate scale and intensity. Uncertainty remains about the optimal set of interventions and mode of delivery. Methods: We systematically reviewed studies reporting interventions for reducing HIV transmission among female sex workers in sub-Saharan Africa between January 2000 and July 2011. Medline (PubMed) and non-indexed journals were searched for studies with quantitative study outcomes. Results: We located 26 studies, including seven randomized trials. Evidence supports implementation of the following interventions to reduce unprotected sex among female

sex workers: peer-mediated condom promotion, risk-reduction counselling and skills-building for safer sex. One study found that interventions to counter hazardous alcohol-use lowered unprotected sex. Data also show effectiveness of screening for sexually transmitted infections (STIs) and syndromic STI treatment, but experience with periodic presumptive treatment is limited. HIV testing and counselling is essential for facilitating sex workers' access to care and antiretroviral treatment (ART), but testing models for sex workers and indeed for ART access are little studied, as are structural interventions, which create conditions conducive for risk reduction. With the exception of Senegal, persistent criminalization of sex work across Africa reduces sex workers' control over working conditions and impedes their access to health services. It also obstructs health-service provision and legal protection. Conclusions: There is sufficient evidence of effectiveness of targeted interventions with female sex workers in Africa to inform delivery of services for this population. With improved planning and political will, services - including peer interventions, condom promotion and STI screening - would act at multiple levels to reduce HIV exposure and transmission efficiency among sex workers. Initiatives are required to enhance access to HIV testing and ART for sex workers, using current CD4 thresholds, or possibly earlier for prevention. Services implemented at sufficient scale and intensity also serve as a platform for subsequent community mobilization and sex worker empowerment, and alleviate a major source of incident infection sustaining even generalized HIV epidemics. Ultimately, structural and legal changes that align public health and human rights are needed to ensure that sex workers on the continent are adequately protected from HIV.

29. Deblonde J, Hamers F, Callens S, Lucas R, Barros H, Rüütel K, Hemminki E, Temmerman M. HIV testing practices as reported by HIV-infected patients in four European countries. *AIDS Care* (2014) 26 (4):487-96

HIV testing constitutes an important strategy to control the HIV epidemic, which therefore merits an observation of HIV testing practices to help improve testing effectiveness. In 2008, a cross-sectional survey among recently diagnosed (≤ 3 years) HIV-infected patients was conducted in Belgium, Estonia, Finland and Portugal. Participants were questioned about reasons for HIV testing, testing place and testing conditions. Univariate and multivariate analyses were performed. Out of 1460 eligible participants, 629 (43%) were included. Forty-one per cent were diagnosed late and 55% had never undergone a previous HIV test with perceived low risk being the primary reason for not having been tested earlier. Heterogeneity in HIV testing practices was observed across countries. Overall, tests were most frequently conducted in primary care (38%) and specialised clinics (21%), primarily on the initiative of the health care provider (65%). Sixty-one per cent were tested with informed consent, 31% received pretest counselling, 78% received post-test counselling, 71% were involved in partner notification and 92% were in care three months after diagnosis. The results showed that HIV testing is done in a variety of settings suggesting that multiple pathways to HIV testing are provided. HIV testing practice is being normalised, with less focus on pretest counselling, yet with emphasis on post-test follow-up. Major barriers to testing are centred on the denial of risk. Efforts are needed to concurrently promote public awareness about HIV risk and benefits of HIV testing and train clinicians to be more proactive in offering HIV testing.

30. Keygnaert I, Guieu A, Ooms G, Vettenburg N, Temmerman M, Roelens K. Sexual and reproductive health of migrants: Does the EU care? *Health Policy* (2014) 114 (2-3): 215-25

The European Union (EU) refers to health as a human right in many internal and external communications, policies and agreements, defending its universality. In parallel, specific health needs of migrants originating from outside the EU have been acknowledged. Yet, their right to health and in particular sexual and reproductive health (SRH) is currently not ensured throughout the EU. This paper reflects on the results of a comprehensive literature review on migrants' SRH in the EU applying the Critical Interpretive Synthesis review method. We highlight the discrepancy between a proclaimed rights-based approach to health and actual obstacles to migrants' attainment of good SRH. Uncertainties on entitlements of diverse migrant groups are fuelled by unclear legal provisions, creating significant barriers to access health systems in general and SRH services in particular. Furthermore, the rare strategies addressing migrants' health fail to address sexual health and are generally limited to perinatal care and HIV screening. Thus, future European public health policy-making should not only strongly encourage its Member States to ensure equal access to health care for migrants as for EU citizens, but also promote migrants' SRH effectively through a holistic and inclusive approach in SRH policies, prevention and care.

31. De Koker P, Mathews C, Zuch M, Bastien S, Mason-Jones AJ. A Systematic Review of Interventions for Preventing Adolescent Intimate Partner Violence. *Journal of Adolescent Health* 54 (2014) 3e13

Purpose: Intimate partner violence (IPV) is a pervasive global health issue affecting adolescents. We reviewed randomized controlled trials of interventions to reduce physical, sexual, and psychological violence perpetration and victimization among adolescents.

Methods: PUBMED, CINAHL, Science Direct, EMbase, PsychLIT, ISI Web of Science, Scopus, and the Cochrane database were searched for English language papers published up to the end of February 2013.

Results: Eight articles reporting on six randomized controlled trials were retrieved. Four interventions contained both school and community components. We found positive intervention effects on IPV perpetration (three studies) and IPV victimization (one study). Compared with the studies with no effects on IPV, the effective interventions were of longer duration, and were implemented in more than one setting. There were quality issues in all six trials.

Conclusion: Interventions targeting perpetration and victimization of IPV among adolescents can be effective. Those interventions are more likely to be based in multiple settings, and focus on key people in the adolescents' environment. Future trials should assess perpetration and victimization of IPV among male and female adolescents with and without prior experiences with IPV, taking gender differences into account.

II. Articles in international scientific journals, reviewed by international experts, not included in the Science Citation Index, Social Sciences Citation Index and Humanities Index. (A2)

1. Johansen E, Diop N, Laverack G, Leye E. What works and what does not: a discussion of popular approaches for the abandonment of female genital mutilation. *Obstetrics and Gynecology International* (2013)

The prevalence of Female Genital Mutilation (FGM) is reducing in almost all countries in which it is a traditional practice. There are huge variations between countries and communities though, ranging from no change at all to countries and communities where the practice has been more than halved from one generation to the next. Various interventions implemented over the last 30–40 years are believed to have been instrumental in stimulating this reduction, even though in most cases the decrease in prevalence has been slow. This raises questions about the efficacy of interventions to eliminate FGM and an urgent need to channel the limited resources available, where it can make the most difference in the abandonment of FGM. This paper is intended to contribute to the design of more effective interventions by assessing existing knowledge of what works and what does not and discusses some of the most common approaches that have been evaluated: health risk approaches, conversion of excisers, training of health professionals as change agents, alternative rituals, community-led approaches, public statements, and legal measures.

2. Vermeirsch S, Sabbe S, Temmerman M, Leye E. De mythe van het maagdenvlies. *Tijdschrift voor Geneeskunde* (2013) 69 (9): 440-445

The hymen can be ruptured during sexual intercourse, but also in many different, non-sexual ways. In cultures where female virginity is highly valued, premarital defloration is a source of shame for both the girl and her family. Thus, these young women, including brides whose virginity cannot be demonstrated at their wedding, run the risk of public humiliation, repudiation, violence, etc. Considering these sanctions, some girls feel forced to request a surgical repair of their hymen. Nevertheless, gynaecologists may refuse to comply with requests to undertake a hymen reconstruction. To justify this point of view, they esteem that this type of medical surgery is misleading and not medically indicated. Furthermore, a double moral standard is maintained: young women – but not men – are expected to remain virgins until their marriage. On the contrary, hymen (re)constructions are justifiable when considered as procedures improving the mental and social well-being, and consequently the overall health of the

patient. Moreover, the decisions taken by competent women concerning their own body should be respected. Hymen (re)constructions are in many ways distinguishable from female genital mutilation (FGM).

3. Michiels K. Limited effectiveness of HIV prevention for young people in sub-Saharan Africa: studying the role of intervention and evaluation. Facts, Views & Vision in ObGyn (2013) 5 (3): 196-208

On average, 2,500 young people (15-24 years) get infected with HIV every day; 80% of which live in sub-Saharan Africa. Since no cure or vaccine is available, reducing sexual risk behaviour in this group is crucial in tackling the epidemic. The general objective of this doctoral study was to improve the effectiveness of HIV prevention interventions for young people in sub-Saharan Africa. First, we assessed the overall effectiveness of such interventions (systematic literature review, meta-analysis). Secondly, we evaluated a school-based peer-led HIV prevention interventions in Rwanda (longitudinal, non-randomized controlled trial), to get insight into how interventions are developed, implemented and evaluated. While the first two objectives demonstrated limited effectiveness, the third objective aimed to identify reasons for this limited effectiveness: a) baseline characteristics of respondents that predict participation were identified (using data from objective 2); b) we studied determinants of young people's sexual behavior using a qualitative 'mailbox study' that assessed the spontaneous thoughts of Rwandan adolescents on sexuality; c) we assessed the role of one specific structural factor: education (literature review and analysis of existing datasets); d) we assessed the theoretical underpinnings of existing HIV prevention interventions for young people in sub-Saharan Africa (literature review). Based on these studies, we discuss two main reasons for the observed limited effectiveness: factors associated with the intervention (strong focus on cognitions and moral, and implementation issues), and with evaluation (design, power, indicators). Recommendations for improving interventions, evaluations and for further research are provided.

4. De Vos T, Waterschoot A, Roelens K, Mukwege D, Temmerman M. Obstetrische en traumatische fistels: situatie in Oost-Congo. Tijdschrift voor Geneeskunde (2013) 69 (11): 559-563

Obstetrische en traumatische fistels vormen nog steeds een groot gezondheidsprobleem in de zich ontwikkelende landen. Wereldwijd zijn er meer dan twee miljoen vrouwen met urogenitale fistels. Gynaecologische fistels worden hoofdzakelijk veroorzaakt door obstetrische verwikkelingen, maar in gebieden die geteisterd worden door etnische conflicten, duiken nu ook meer en meer traumatische fistels op ten gevolge van seksueel geweld. In dit manuscript wordt de ernst van de fistelproblematiek in de streek van Kivu in de Democratische Republiek Congo (DRC) verduidelijkt.

III. Book Chapters (B2)

Van Parys A-S, Roelens K, Temmerman M. Zwangerschap en partnergeweld. In: Handboek familiaal geweld (februari 2013, afl. 5), Blow H (ed.), Brussel, Politeia

IV. Presentations and posters (C3)

1. Van Braeckel D, Decat P, Degomme O. Joining forces across sectors to meet the unmet need for family planning. First Global Conference on Contraception, Reproductive Health; May 22-25, 2013, Copenhagen, Denmark

Objectives: Since the 1994 Cairo conference on Population and Development, the liberty of women and couples to decide freely on the number and timing of their children is widely recognised as a human right. One of the consequences of this consensus, the necessity to provide universal access to modern family planning methods, has however proven difficult to realise. Despite the obvious beneficial impacts of generalised access to family planning services on maternal and child health, as well as on the economic, social and psychological well-being of individuals

and communities, the number of women who don't have access to FP today is still estimated at 222,000. In some countries, the percentage of women who are willing to delay or avoid pregnancy but have no access to modern methods reaches 40%. Advocates for providing universal access to family planning are traditionally to be found in circles of health care and women's rights, and their efforts to raise funding and political support for their cause is often hampered by competition with other causes, many of them undoubtedly being of comparable importance. One of these is the preservation of the environment and the fight against climate change. In a world of scarce resources, competition is unavoidable, but identifying synergies between causes and joining forces across sectors may lead to broader support and more successful policies and programmes.

Methods: In this presentation, we explore the interrelatedness between meeting the unmet need for family planning on the one hand, and fighting climate change and environmental deterioration on the other.

Results: Population size is – together with lifestyle and use of technology – one of the main drivers of climate change. Reducing fertility and slowing down population growth have significant impacts on emission of greenhouse gasses, and one would expect that this is reflected in considerable attention and support from political and societal actors in the field of environment, for policies that are aimed at improving access to contraception. In practice however, the issues of family planning and demography are largely absent in the climate change debates. Similarly, population is an important stress factor on many natural resources and vulnerable ecosystems, but conservation activities rarely include family planning initiatives.

Conclusions: We conclude by pointing at opportunities for synergies and mutual reinforcement of environmental and demographic research, policy and action, and we plead for an integrated policy approach to tackle environmental and family planning issues.

2. Borgdorff H, Tsvitsivadze E, Verhelst R, Marzorati M, Ndayisaba G, Schuren F, van de Wijgert J. *Lactobacillus crispatus*-dominated cervicovaginal microbiome associated with fewer sexually transmitted infections in African sex workers. Exploring Human Host Microbiome Interactions in Health and Disease, 2nd Wellcome Trust conference; July 8-10, 2013, Cambridge, UK

Background. Improved knowledge on the relationships between the cervicovaginal microbiome and adverse reproductive health outcomes could lead to low cost interventions directed at maintaining and restoring a healthy microbiome. Methods. Cervical samples of 174 female sex workers in Kigali, Rwanda, were analysed cross-sectionally using a phylogenetic microarray specifically designed for the cervicovaginal microbiome. Women with sexually transmitted infections (STIs) were purposefully oversampled. Two hundred fifty one probes were used for co-regularised spectral clustering analysis and 123 probes (specific at species or genus level) to describe the cervicovaginal microbiome clusters. Demographic, behavioral, and clinical correlates of the clusters were also determined. Results. Six cervicovaginal microbiome clusters were identified. Clusters R-I and R-II were dominated by *Lactobacillus crispatus* and *L. iners*, respectively, were associated with a Nugent score of 0-3, and had a low (semi-quantitative) bacterial load and diversity. Clusters R-III to R-VI were dominated by *Gardnerella vaginalis*, *Atopobium* spp. and *Prevotella* spp. in different compositions, and were associated with a Nugent score of 7-10; cluster R-V had an intermediate bacterial load and diversity and clusters R-III/R-IV/R-VI had high bacterial loads and diversity. Women in cluster R-I were less likely to have HIV (9% versus 33-57%; p 0.03), herpes simplex virus-2 (36% versus 78-100%; p <0.01), and high risk human papilloma virus (0% versus 38-56%; p <0.01) than the women in the other clusters, and they had no bacterial STIs. Statistically significant trends were found, with the lowest prevalence of STIs in cluster R-I and an increasing prevalence in clusters R-II, R-V, and R-III/ R-IV/ R-VI. Conclusion. In this sample of African sex workers with a high prevalence of HIV and STIs, six cervicovaginal microbiome clusters were identified. Sex workers with a microbiome dominated by *L. crispatus* (but not *L. iners*) did not have bacterial STIs and were less likely to have viral STIs than women with other microbiome compositions. Longitudinal studies are needed to determine the temporal relationships between the cervicovaginal microbiome and STIs.

3. Mwaura M, Hardy L, Delany-Moretlwe S, Ndayisaba G, Mandaliya K, Verhelst R, Verstraelen H, van de Wijgert J, Crucitti T, Jaspers V. There is a need for multipurpose prevention technologies targeting HIV and common reproductive tract infections: data from the Microbicides Safety Biomarkers Study Team. STI & AIDS World Congress; July 14-17, 2013, Vienna, Austria * Sexually Transmitted Infections (2013) 89 (S1): A166-A167

Background The ideal vaginal microbicide should reduce the risk of HIV infection and other reproductive tract infections (RTIs) while preserving the integrity of the cervicovaginal epithelium. Future microbicides and multipurpose prevention technologies (MPT) could improve maternal reproductive health and prevent multiple sexually transmitted infections. **Objectives and Methods** The Microbicide Safety Biomarkers Study is a prospective cohort study of 110 adults, 30 adolescents and 30 pregnant women in Kenya and South-Africa, 30 women engaging in vaginal practices in South-Africa and 30 high-risk and 30 HIV-positive women in Rwanda. RTIs and biomarkers of the vaginal microbiome and inflammation were studied. **Results** Baseline prevalence RTI data are presented in the table. A significant difference ($p = 0.027$ to 0.001) between the study groups was present for all RTIs except for *Trichomonas vaginalis* (TV). *Neisseria gonorrhoeae* (NG), syphilis and HSV-2 were associated ($p < 0.001$) with sexual risk taking behaviour (sex worker OR at least 3 partners last year OR at least one sexual partner with HIV in the past 3 months OR age first sex less than 15 years). HSV-2 was detected in 51.5% of the high risk-takers compared to 28.6% of the low risk-takers. For women with bacterial vaginosis (Nugent 7–10) *Chlamydia trachomatis* (CT) ($p < 0.028$) was present in 14.9% and TV ($p < 0.001$) in 9% compared to 6.3% and 1.5% in women without BV (Nugent 0–3), respectively. **Conclusion** RTIs are common among African women targeted for microbicide trials. The introduction of a MPT targeting a combined prevention of HIV and HSV-2 is warranted in these populations.

4. Borgdorff H, Tsvitsvadze E, Verhelst R, Schuren F, Marzorati M, van de Wijgert J. The vaginal microbiome and its clinical correlates in a cohort of African sex workers. STI & AIDS World Congress; July 14-17, 2013, Vienna, Austria

Background: Although Sub-Saharan Africa is one of the most important areas in the world to study the complex relationships between the vaginal microbiome and reproductive health outcomes, data are limited. **Methods:** Endocervical samples of 174 female sex workers in Kigali, Rwanda, were analyzed cross-sectionally using a phylogenetic microarray specifically designed for the cervicovaginal microbiome. Women with sexually transmitted infections (STI) were purposefully oversampled. Two hundred fifty one probes were used for co-regularized spectral clustering analysis and 123 probes (specific at species or genus level) to describe the vaginal microbiome clusters. Demographic, behavioral, and clinical correlates of the clusters were also determined. **Results:** The prevalence of HIV (36%) and other STIs (bacterial STI 46%, HPV 48%, and HSV-2 78%) in the analysis sample were high by design. Six distinct vaginal microbiome clusters were identified. Two clusters were dominated by *Lactobacillus crispatus* and *L. iners*, respectively, and were associated with a Nugent score of 0-3. Three clusters were dominated by *Gardnerella vaginalis*, *Atopobium* spp. and *Prevotella* spp in different compositions, and were associated with a Nugent score of 7-10. The sixth cluster, also dominated by anaerobic bacteria, was not associated with a particular Nugent score category. Women belonging to the *L. crispatus* cluster were significantly less likely to have bacterial (0% compared to 32-67%) and viral STIs (36% compared to 89-100%) than women in the other 5 clusters. **Conclusion:** In this sample of African sex workers with a high prevalence of HIV and STIs, six vaginal microbiome clusters were identified. Sex workers with a vaginal microbiome dominated by *L. crispatus* (but not *L. iners*) did not have bacterial STIs and were less likely to have viral STIs than women with other microbiome compositions. Longitudinal studies are needed to determine the temporal relationships between the vaginal microbiome and various STIs.

5. Verwijs M, Borgdorff H, Wit F, Schuren F, Lutter R, Verhelst R, Bonten M, van de Wijgert J. The influence of hormonal contraception and pregnancy on the vaginal microbiome, sexually transmitted infections, and cytokine responses in a cohort of Rwandan sex workers. STI & AIDS World Congress; July 14-17, 2013, Vienna, Austria

Background: The effects of hormonal contraception and pregnancy on the vaginal microbiome (by molecular methods), acquisition and persistence of sexually transmitted infections (STIs), and genitourinary mucosal immunology are still largely unknown. **Methods:** HIV-negative, non-pregnant female sex workers ($n=397$) in Kigali, Rwanda, were followed for two years. Demographic, behavioral, clinical, STI and pregnancy data were collected at regular intervals. The vaginal microbiome was cross-sectionally determined using a phylogenetic microarray ($n=174$). Women with STIs were purposefully oversampled in this subsample. Inflammatory cytokines were measured in cervicovaginal fluid using Luminex and ELISA methodology ($n=343$). Hormonal exposure was defined

as use of hormonal contraception (oral or injectable) or a positive urine pregnancy test. Women in the exposure groups were compared to non-pregnant women who did not use hormonal contraception. Adjustments were made for demographic data and sexual risk taking. Results: At baseline, 12% of the women used hormonal injectables, and 6% oral contraceptives (OC); 7.7% was pregnant. OC use was associated with higher HPV prevalence (aOR 3.09; 95% CI 1.42-7.72), higher Chlamydia trachomatis incidence (aOR 7.13; 95% CI 1.40-36.30), and lower syphilis prevalence (0% vs 7.2% in controls) and incidence (0% vs 1.2%). Hormonal injectables were associated with higher HSV-2 prevalence (aOR 2.08; 95% CI 1.23-3.50). Pregnancy was weakly associated with higher *Trichomonas vaginalis* (aOR 1.67; 95% CI 0.97-2.88) and vaginal yeast (aOR 1.95; 95% CI 0.99-3.82) incidence. Six vaginal microbiome clusters were identified. No associations between hormonal exposure status and vaginal microbiome clusters were found; however, pregnant women had lower *Gardnerella vaginalis* levels. Pregnant women had higher IL-8 levels in cervicovaginal fluids than non-exposed women. Conclusions: Both hormonal contraception and pregnancy were associated with higher STI incidence. Overall, vaginal inflammation and microbiome composition were similar among groups, but pregnant women had lower *Gardnerella* and higher IL-8 levels.

6. Mwaura M, Hardy L, Delany-Moretlwe S, Ndayisaba G, Mandaliya K, Menten J, Verhelst R, van de Wijgert J, Crucitti T, Jespers V. Prevalence reproductive tract infections (RTI) in women targeted for microbicide trials: the Microbicide Safety Biomarkers Study in Kenya, Rwanda, and South Africa. STI & AIDS World Congress; July 14-17, 2013, Vienna, Austria

Background: The ideal microbicide should reduce the risk of HIV-infection while preserving the integrity of the cervicovaginal epithelium. RTI could hamper the protective effect of microbicides. Methods: The Microbicide Safety Biomarkers Study is a prospective cohort study in Kenya (adult, adolescent and pregnant women), South-Africa (adult, adolescent, pregnant and women engaging in vaginal practices) and Rwanda (high-risk and HIV-positive women). Biomarkers of the cervico-vaginal microbiome and inflammation, HIV target cells and reproductive tract infections (RTI) were studied. RTI data at screening are presented. Results: There was a significant difference ($p < 0.001$) in the prevalence of *Candida albicans*, *Chlamydia trachomatis* (CT), *Neisseria gonorrhoea* (NG), syphilis and herpes simplex-2 (HSV-2) between different study groups. Pregnant women have the highest prevalence of *Candida* (56.7% South-Africa, 23.3% Kenya), followed by the South-African adolescents (36.7%) and vaginal practices group (32.3%). HIV-positive women in Rwanda have the highest prevalence of NG (13.3%), syphilis (20%) and HSV-2 (82.2%), and women engaging in vaginal practices have the highest prevalence of CT (25.8%). When stratifying according to sexual risk taking, no significant difference was seen for *Candida* or *Trichomonas vaginalis* (TV). But NG, syphilis and HSV-2 were associated with sexual risk taking ($p < 0.001$); for example HSV-2 was detected almost twice as frequent in the high risk-takers (51.5%) compared to the low risk-takers (28.6%). Further, CT was associated ($p < 0.001$) with BV, women who didn't suffer from BV had a lower risk (1.5%) at acquiring CT than women with BV (9%). For CT, NG, syphilis and HSV-2, the same trend was seen, but for *Candida*, the prevalence was comparable for women with (22.3%) and without BV (24.2%). Conclusion: Among African women targeted for microbicide trials, RTI are common and vary by multiple factors. It is therefore essential to evaluate the effects of RTI on the efficacy and safety of microbicides.

7. Hardy L, Jespers V, Menten J, Verhelst R, Mwaura M, Delany-Moretlwe S, Ndayisaba G, Verstraeten H, van de Wijgert J, Crucitti T. Bacterial species in the vaginal microbiome correlated by Nugent score: cross-sectional data from the Microbicide Safety Biomarkers Study in Kenya, Rwanda and South Africa. STI & AIDS World Congress; July 14-17, 2013, Vienna, Austria

Background: Increasingly, research is being conducted to define the characteristics of a normal healthy vaginal microbiome and predict development of disturbances. Studies performed in African women are scarce and knowledge about their healthy normal microbiome is lacking. Methods: Women were recruited in three African countries and followed up over seven visits. Each visit, vaginal specimens were examined using Nugent score and analyzed by quantitative PCR to detect and quantify *Lactobacillus* species, *Gardnerella vaginalis* (GV) and *Atopobium vaginae* (AV). The preliminary baseline data are presented. Results: Out of 376 women, 208 (55.3%) had a Nugent score 0 (normal), 29 (7.7%) a score 4-6 (intermediate) and 130 (34.6%) a score of 7-10 (BV). Nugent score was associated with a significant difference in prevalence of species ($p < 0.001$); except for *L. gasseri* ($p = 0.044$).

Almost all (99.5%) women with normal microbiome harboured *Lactobacillus*: *L. iners* (84.1%) and *L. vaginalis* (43.8%) were frequently detected; *L. crispatus* (34.1%), *L. jensenii* (27.9%) and *L. gasseri* (11.1%) were less prevalent. GV and AV were detected in 28.4% and 13.5%, respectively. Conversely, in women with BV, GV (93.8%) and AV (82.3%) were frequently present, but *Lactobacillus* less frequent (*L. jensenii* and *L. gasseri* 3.8%; *L. crispatus* 6.2%; *L. vaginalis* 6.9%; *L. iners* 66.9%). The qPCR results of the intermediate group were all between the results of the normal microbiome and BV except for *L. iners*, detected in 62.1%. Conclusion: As expected, women suffering from BV (as determined by Nugent scoring) frequently harboured GV and AV. *L. iners* was most often present overall. We detected *L. vaginalis* more often than *L. crispatus*, especially in the normal microbiome, which is in contrast with previous studies. However, when *L. crispatus* was present, counts were almost always high (>106/ml). In contrast, for *L. vaginalis*, counts were high in less than half of the cases.

8. Duysburgh E, Ye M, Williams A, Massawe S, Temmerman M. Health workers' counselling practices on and women's awareness of pregnancy danger signs in selected rural health facilities in Burkina Faso, Ghana and Tanzania. 8th European congress on Tropical Medicine and International Health; 5th Conference of the Scandinavian-Baltic Society for Parasitology; September 10-13, 2013, Copenhagen, Denmark * Tropical Medicine & International Health (2013) 18 (S1): 183

Background This study assessed health workers' counseling practices on danger signs during antenatal consultation and pregnant women's awareness of these signs and identified factors affecting counselling practices and women's awareness. The study is part of QUALMAT, an intervention research project funded by the European Commission aiming to improve maternal and newborn health. QUALMAT is conducted in Burkina Faso, Ghana and Tanzania. **Methods** A cross-sectional study was performed in 12 selected primary healthcare facilities in each country. WHO guidelines were used as standard for good counselling. We assessed providers' counselling practice on seven danger signs through direct observation study (35 observations/facility). Exit interviews (63 interviews/facility) were used to assess women's awareness of the same seven signs. We used negative binomial regression to assess associations with health services' and sociodemographic characteristics. **Results** About one in three women were not informed on any danger sign. For most single signs, less than half of the women were counselled. Vaginal bleeding and severe abdominal pain were the signs most counselled on (between 52 and 66%). At study facilities in Burkina Faso 58% of women were not able mentioning a danger sign, in Ghana this was 22% and in Tanzania 30%. Fever, vaginal bleeding and severe abdominal pain were signs most frequently mentioned. Kind of health worker (depending on training) was significantly associated with counselling practices. Depending on the study site, characteristics significantly associated with awareness of signs were women's age, gestational age, gravidity and women's educational level. **Conclusion** Counselling practice is poor and not very efficient. A new approach of informing pregnant women on danger signs is needed. Adopting a more client-centred approach might be an option. However as effects of ANC education remain largely unknown it is very well possible that improved counselling will not have effect on maternal and newborn mortality and morbidity.

9. Duysburgh E, Kerstens K, Diaz M, Fardhdiani V, Reyes K, Phommachanh K, Rodriques B, Zaka N. Newborn care in three selected South East Asian countries: a comprehensive needs assessment. 8th European congress on Tropical Medicine and International Health; 5th Conference of the Scandinavian-Baltic Society for Parasitology; September 10-13, 2013, Copenhagen, Denmark * Tropical Medicine & International Health (2013) 18 (S1): 83

Background As observed globally, decrease of neonatal mortality between 1990 and 2010 in the assessed countries – Indonesia, Lao PDR and the Philippines – was slower than decline of under-5 and infant mortality. As a result the proportion of under-5 deaths due to neonatal mortality increased which urges the need for focus on newborn care. Findings of the comprehensive needs assessment, conducted from November 2012 to March 2013 on behalf of UNICEF EAPRO, will inform country level strategies, work-plans and partnerships for accelerating reduction of neonatal mortality and morbidity. **Methods** An in-depth study of newborn health policies, services and care in the three countries through desk review, stakeholder mapping, key informants interviews and health facility visits was followed by analysis of data found using a 'strengths, weaknesses, opportunities, threats' analysis, an equity analysis and the Save the Children's Scale-up Readiness Benchmarks tool to assess current newborn health situation and country's readiness for scaling up newborn care. Based on the findings, recommendations were

formulated. Results Main findings are: (i) comprehensive newborn policies in line with international standards exist although implementation remains poor, (ii) quality of newborn care is generally substandard, (iii) access to skilled providers is limited, (iv) health sector decentralisation brought opportunities and threats for newborn care, (v) fragmentation across several MoH departments hampers coordination and implementation of newborn care, (vi) socio-economic and demographic inequities in newborn care are considerable, and (vii) regulation and cooperation with the private sector is lacking. Conclusion Similar challenges for newborn care are identified in assessed countries and show need to improve access to quality newborn care. Main opportunities identified to address this need include: strengthening newborn pre-service training, providing supportive supervision and strengthening leadership and skills of mid-level health management to enhance newborn care. Interventions to minimize socio-economic and demographic inequities are urgently needed.

10. Decat P. Universal Health Coverage: yes, but coverage of what? The need for people-centred Care. 8th European Congress on Tropical Medicine and International Health; September 10-13, 2013, Copenhagen, Denmark

11. Decat P. Community-embedded Reproductive Care for Adolescents: an intervention model for tackling adolescent pregnancies: development and preliminary results of a complex intervention in Nicaragua. 1st congress of the world Association for Public Health; September 20-24, 2013, Porto Alegre, Brazil

12. Tilahun T, Coene G, Luchters S, Kassahun W, Leye E, Temmerman M, Degomme O. Family planning knowledge, attitude and practice among married couples in Jimma zone, Ethiopia. International Conference on Family Planning; November 12-15, 2013, Addis Abeba, Ethiopia

Significance/background: Understanding why people do not use family planning is critical to address unmet needs and to increase contraceptive use. According to the Ethiopian Demographic and Health Survey 2011, most women and men had knowledge on some family planning methods but only about 29% of married women were using contraceptives. 20% women had an unmet need for family planning. Main question/hypothesis: The primary objective of this study was to examine the contraceptive prevalence rate among married couples and to study the factors that influence contraceptive use. A secondary objective was to determine knowledge on contraceptives (method-specific; including barrier, hormonal, permanent and dual protection methods), and attitudes towards family planning. Finally, fertility preference among married couples was assessed to see the variation between men and women. Methodology: Data were collected from March to May 2010 among 854 married couples using a multi-stage sampling design. Quantitative data based on semi-structured questionnaires was triangulated with qualitative data collected during focus group discussions. We compared proportions and performed logistic regression analysis. Results/key findings: The concept of family planning was well known in the studied population. Sex-stratified analysis showed pills and injectables were commonly known by both sexes, while long-term contraceptive methods were better known by women, and traditional methods as well as emergency contraception by men. Formal education was the most important factor associated with better knowledge about contraceptive methods (aOR= 2.07, p<0.001), in particular among women (aORwomen= 2.77 vs. aORmen= 1.49; p<0.001). In general only 4 out of 811 men ever used contraception, while 64% and 43% females ever used and were currently using contraception respectively. Knowledge contribution: The high knowledge on contraceptives did not match with the high contraceptive practice in the study area. The study demonstrates that mere physical access (proximity to clinics for family planning) and awareness of contraceptives are not sufficient to ensure that contraceptive needs are met. Thus, projects aiming at increasing contraceptive use should contemplate and establish better counseling about contraceptive side effects and method switch. Furthermore in all family planning activities both wives' and husbands' participation should be considered.

13. Keygnaert I, De Meyer S, Frans E, Demyttenaere T, Temmerman M. Make it work!: training manual for sexual health promotion and prevention of sexual and gender-based violence in the European reception and asylum sector. 6th European Public Health Conference (EUPHA 2013): Health in Europe - Are we there yet?; November 14-16, 2013, Brussels, Belgium * European Journal of Public Health (2013) 23 (S1): 196

14. Jaruseviciene L, De Meyer S, Decat P, Zaborskis A, Auquilla N, Hagens A, Lazarus J. Gender attitudes and sexual behaviour in Bolivian and Ecuadorian adolescents. Global Conference on Contraception, Reproductive and Sexual Health; May 22-25, 2013, Copenhagen, Denmark * European Journal of Contraception & Reproductive Health Care (2013) 18 (S1): S108-S109
15. Orozco M, Decat P, Segura Z, Ibarra M, De Meyer S, Medina J, Jaruseviciene L. Intrapersonal factors associated with sexual onset and contraceptive use among adolescents in Managua, Nicaragua. Global Conference on Contraception, Reproductive and Sexual Health; May 22-25, 2013, Copenhagen, Denmark * European Journal of Contraception & Reproductive Health Care (2013) 18 (S1): S92
16. Decat P, De Meyer S, Jaruseviciene L, Ibarra M, Medina J, Auquilla N, Hagens A. Community embedded reproductive Health interventions for adolescents in Latin America: Development of a complex intervention. Global Conference on Contraception, Reproductive and Sexual Health; May 22-25, 2013, Copenhagen, Denmark * European Journal of Contraception & Reproductive Health Care (2013) 18 (S1): S98-S99
17. Jaruseviciene L, Lazarus J, Decat P, De Meyer S, Valius L, Temmerman M. Improving adolescent sexual and reproductive health care in Bolivia, Ecuador and Nicaragua. 10th World Congress Bridging Clinical and Public Health Perspectives to Promote Adolescent Health; June, 11-13, 2013, Istanbul, Turkey * Turkish Archives of Pediatrics (2013) 48 (S2): 41
18. Decat P, De Meyer S, Jaruseviciene L, Vega B, Cordova K, Orozco M, Segura Z, Temmerman M. Intrapersonal factors associated to adolescent sexual behaviour in Latin America: a cross sectional survey in three cities. 10th World Congress Bridging Clinical and Public Health Perspectives to Promote Adolescent Health; June, 11-13, 2013, Istanbul, Turkey * Turkish Archives of Pediatrics (2013) 48 (S2): 111
19. De Meyer S, Decat P, Jaruseviciene L, Temmerman M. Do gender attitude and sex of sexually inexperienced adolescents influence their opinion of sexual intercourse? 10th World Congress Bridging Clinical and Public Health Perspectives to Promote Adolescent Health; June, 11-13, 2013, Istanbul, Turkey * Turkish Archives of Pediatrics (2013) 48 (S2): 41
20. Jaruseviciene L, De Meyer S, Decat P, Cordova K, Auquilla N, Segura Z, Valius L. Does egalitarian gender attitudes are related to adolescent sexual behavior? 21st World Congress for Sexual Health; September 21-24, 2013, Porto Alegre, Brazil * The Journal of Sexual Medicine (2013) 18 (S5): 299
21. Jaruseviciene L, Decat P, De Meyer S, Lazarus J. Sexual and reproductive health care for adolescents in Bolivia, Ecuador and Nicaragua: possibilities for improvement from the perspective of primary health care providers. 6th European Public Health Conference, November 13-16, 2013, Brussels, Belgium * European Journal of Public Health (2013) 23 (S1): 252

V. Varia (V)

1. Delva W, Fleming Y, Chingandu L. When to start ART in Africa: primarily guided by RCTs or patient autonomy? Journal of the International AIDS Society (2013) 16: 18756 (Editorial)

VI. PhD ICRH Monographs (D1)

1. Richter M. Characteristics, sexual behaviour and access to health care services for sex workers in South Africa and Kenya. ICRH Monographs, ISBN 9789078128267
2. Tency I. Inflammatory response in maternal serum during preterm labour. ICRH Thesis ISBN9789078128274
3. Shamu S. The dynamics of intimate Partner Violence during pregnancy and linkages with HIV infection and disclosure in Zimbabwe. ICRH Monographs, ISBN 9789078128298
4. Hamers F. HIV/AIDS in Europe: The link between surveillance and prevention. ICRH Monographs, ISBN 9789078128281

Human resources

Conducting a state-of-the art HRM policy is far from easy given the strict regulations imposed by Ghent University and the fact that the vast majority of our staff depends on project funding and therefore can only be given contracts of limited duration. Nevertheless, within these limitations ICRH has taken measures aimed at creating an encouraging and comfortable working environment. These measures include:

- flexible working hours;
- a policy for working from home;
- evaluation and functioning talks for every staff member.

List of employees in 2013

John-Paul Bogers	Visiting Professor
Steven Callens	Senior Researcher
Matthew Chersich	Visiting Professor
Beatrice Crahay	Volunteer Mozambique (and Country Director of ICRH Mozambique)
Peter Decat	Researcher & Team Leader Health Systems
Olivier Degomme	Scientific Director
Wim Delva	Visiting Professor
Stéphanie De Maesschalck **	Researcher & Family physician
Sara De Meyer	Researcher
Cindy De Muynck	Administration and support
Lou Dierick	Volunteer Kenya (and Director F&A ICRH Kenya)
Els Duysburgh	Researcher & Team Leader Maternal Health
Peter Gichangi	Visiting Professor
Dominique Godfried	Secretariat Ghent Africa Platform (GAP)
Aurore Guieu	Researcher
Laurence Hendrickx	Permanent Expert in Mozambique
Karen Hoehn *	Hélène De Beir Research Fellow
Birgit Kerstens **	MOMI Consortium Project Administrator
Ines Keygnaert	Researcher
Yves Lafort	Researcher & Team Leader HIV/STI
Els Leye	Senior Researcher & Team Leader GBV
Stanley Luchters	Visiting Professor
Fei Meng *	PhD Fellow & Researcher
Kristien Michielsen	Researcher
Chris Moreel *	Financial Assistant
Katherine Muylaert	Administrative Project Manager
Emilomo Ogbe *	Internship
Gorik Ooms **	Hélène De Beir Research Fellow
Marlise Richter	PhD Fellow & Researcher
Alexia Sabbe **	PhD Fellow & Researcher
Dirk Schelstraete * *	Financial Assistant
Dirk Van Braeckel	Director Administration & Finance
Davy Vanden Broeck	Senior Researcher

An-Sofie **Van Parys**
Rita **Verhelst**
Heleen **Vermandere**
Bavo **Verpoest** **
Shuchen **Wang**
Wei-Hong **Zhang**

Phd Fellow & Researcher
Senior Researcher
Phd Fellow & Researcher
Project Collaborator
Researcher
Senior Researcher

* Joined ICRH in the course of 2013 or in the beginning of 2014. Welcome to the ICRH family!

** Left ICRH in the course of 2013. Thanks a lot for the work you have done with us, and good luck in your career!



ICRH Belgium Christmas party 2013

ICRH and the environment

The impact of research activities on the environment is rather limited compared to other sectors such as industry or transportation. However, our environmental impacts are not negligible, and as adherents of sustainable development and the millennium development goals, we hold ourselves responsible for striving to limit our environmental footprint as much as possible. Our main impacts stem from transportation, paper use and energy consumption. In each of these fields, we have taken measures to avoid excessive consumption of resources or emissions.

Transportation

For reducing the impacts of commuting of ICRH employees, we benefit from the general stimulation measures of Ghent University:

- Public transport commuting expenses are fully reimbursed,
- Commuting by car is discouraged and related costs are not reimbursed,
- Employees can rent a bicycle from the university at favorable conditions, and employees commuting by bicycle receive a financial compensation.

Waste production

Extrapolated from partial data

ICRH produces almost exclusively office waste, such as paper and ink cartridges. Wasted is sorted and the fractions are separately removed by the maintenance staff.

ICRH is monitoring its paper consumption for copying and printing. The evolution is as follows:

	Oct. 2008- Sept 2009*	Oct. 2009- Sept. 2010	Oct. 2010- Sept 2011	Oct 2011- Sept 2012	Oct 2012- Sept 2013*
Black and white prints and copies	185989	140,495	139,992	145,337	104,276
Colour prints and copies	-	25,543	36,027	44,162	20,093
Total	185989	166,038	176,019	189,499	124,369
Difference compared to the previous year		-10.3%	+6.0%	+7,7%	-34,4%

Compared to 2012, the number of photocopies and prints has decreased significantly. This may partially be linked to specific activities and projects, but in addition also the following measures will have played a role:

- renewed insisting on compliance with printing and copying guidelines;
- gradual shifting to electronic document storage for administration
- outsourcing large quantities of photocopies to a print shop

Energy use

The non-transportation related energy consumption of ICRH is mostly limited to office heating and lighting. There is no separate tracking of energy consumption for the ICRH offices. We try to bring down our energy consumption by 'good housekeeping measures', such as switching off the lights and turning down the heating whenever possible. In 2014, all work stations will be equipped with multiple plug sockets with on/off switch, allowing to cut off electricity completely when the equipment is not in use. This can save at least 3,500 KWh per year.

The Ghent University Sustainability Pact

In the course of 2011, Ghent University students, together with the university's environmental and communication departments, launched a university-wide initiative to reduce the environmental burden. Departments, laboratories and offices are requested to sign a sustainability pact, in which they commit to a number of very diverse environmental measures, ranging from energy saving actions like switching off lights, heating and computers, over applying environmental criteria to purchases, to encouraging environmentally friendly commuting. ICRH was the first department within the Faculty of Medicine and Health Sciences to sign the Pact. One of our actions within the framework of this plan is a gradual shift towards sourcing vegetarian, organic and fair trade catering for meetings and receptions.

ICRH Group

The International Centre for Reproductive Health in Belgium works closely together with its sister organizations ICRH Kenya, based in Mombasa and Nairobi, and ICRH Mozambique, based in Maputo and Tete. In order to formalize the close ties between these organizations, and to facilitate coordination, an umbrella organization has been set up in 2009 under the name of ICRH Global. Below we give a brief outline of ICRH Global, ICRH Kenya and ICRH Mozambique.

ICRH Global

The Board of Directors of this not-for-profit organization consists of representatives from ICRH Belgium, ICRH Kenya, ICRH Mozambique, and the Ghent University, and vice versa, ICRH Global also appoints representatives in the management structures of the individual ICRHs.

In addition to its coordination tasks, ICRH Global will organizes networking and information activities in the field of sexual and reproductive health and rights.

Organizations as well as individuals can become member of ICRH Global.

In addition to the coordination and management activities, ICRH Global co-organized in 2013 lectures and sensitization events, and also facilitated and supervised the maternity waiting home project which is described in 3.1.1.

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ICRH Kenya

In the year 2013, 'Haki Yenu' (It is your right), a study started in October 2011 that investigated the barriers to accessing justice for survivors of Sexual and Gender Based Violence (SGBV) ended with official launch of the findings from the study by Hon. Joab Tumbo, the Mombasa County Minister for health on 15th November 2013 at a Mombasa hotel.

ICRHK continued to support the Most at Risk Populations (MARPS) interventions in Coast Province through the UNFPA funded Alternative Means of Livelihood and AphiaPlus programs. These activities are being complemented by the Learning Site (LS) program which is a model service delivery program for the MARPs. This program will be reaching about 6,400 sex workers both male and females. In 2013, the LS team conducted training for Peer educators from KANCO and AMURT. ICRHK is also implementing a peer education program targeting youth out of school with sexual and reproductive health information and services in Kilifi country. The program reaches young people with information and services through an established Drop in Service Centre and other outreach activities including sports.

The MOMI project, started in the year 2011 had the baseline data collection and analysis completed and reports submitted to European Union (EU). The intervention activities informed by baseline findings were initiated including clinical skills training for nurses and community health workers.

The Gender Based Violence Recovery Centre (GBVRC) based at the Coast Province General Hospital (CPGH) continued to provide services. During 2013, a total of 646 survivors were attended to cumulatively reaching 4,109 since inception in May 2007. During the year, ICRHK was also able to support Mtwapa Health Centre (MHC) and Kilifi County Hospital (KCH) in setting up (renovations and equipment purchase) two other GBVRCs to improve access to and the quality of services in these areas. Other GBV activities during the year include training of health workers on post rape care, community education and sensitization on SGBV through *inter alia* the paralegal program.



Paralegals participating in 16 days of activism/ Pre World AIDS day activities at Makadara grounds, Mombasa

A new project Performance and Monitoring and Accountability (PMA2020) was initiated which will use smart phones to collect demographic like reproductive health data across selected Counties in Kenya. This is a five year project which will contribute to monitoring achievements for Family Planning 2020 (FP2020) will be run from ICRHK Nairobi office. PMA2020 has a website containing details about the project: www.pma2020.org. ICRHK will lead the implementation of PMA2020 in Kenya, partnering with 4 local universities and government institutions: Ministry of Health, National Council for Population and Development (NCPD) and Kenya National Bureau of Statistics (KNBS).

ICRH Kenya in conjunction with Colibri Foundation set up maternity shelters close to Kilifi and Malindi district hospitals. The project was initiated in May 2012 with a specific objective of increasing uptake of services at the maternity shelter, by improving referrals systems from community to the maternity shelters. Since then, maternity shelters have continued to be a solution in providing a setting where high-risk women are accommodated during the final weeks of pregnancy near a hospital with Comprehensive Emergency Obstetric and Newborn care facilities. Additional emphasis has also been put on education and counseling regarding pregnancy, delivery and care of newborn infant and family. HIV testing and counseling services are also offered to the mothers and their caregivers who accompany them in the shelters. 2013, a total of 419 women were admitted in the shelters, 195 from Kilifi and 224 from Malindi. 397 deliveries were recorded with 97.5% live births.

The Diagonal Interventions to Fast Forward Enhanced Reproductive Health (DIFFER), a 4-country study (of Kenya, India, South Africa and ICRH Mozambique) launched at a kick-off meeting in Mombasa in October 2011, completed situational data collection and preliminary analysis and dissemination during 2013.

In November 2013, the ICRH Kenya office relocated to the Technical University of Mombasa (TUM) which is about 400 meters away from the previous office. This will hopefully strengthen the research collaboration between ICRH and TUM.



Mr. Nzioki Kingola, ICRHK's Director of Interventions officially handing over equipment to the newly established GBVRC at Mtwapa Health Centre

ICRH Mozambique

In 2013 ICRH-M continued to work with Tete Provincial Health Directorate to improve maternal and child health services through implementation of operational research activities such as the integration of nutrition and family planning counseling among the members of the community HIV support groups. Other interventions include support for better integration of maternal and child health services and for increased access to postpartum family planning at the facility level in Chiuta district, with the aim of decreasing maternal and child mortality during the first year of post-partum started. The situation analysis on the availability and quality of reproductive health services for women in general and for female sex workers in particular was finalized in Tete and Moatize while the Night Clinic that offers health services for female sex workers and other key populations was inaugurated in Moatize town in March 2013.

In 2013 ICRH-M also extended its geographic area of intervention: a five-year family planning project that aims to understand and overcome the determinants of access and use of family planning services was started in Maputo Province while the research about the determinants on the use and access of maternity waiting homes was finalized in Inhambane and Tete Provinces.

ICRH-M also developed and approved its 2014-2018 Strategic Plan. It identifies four strategic areas, research, communication and advocacy, services delivery and institutional development.





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Donations

By supporting our projects and interventions, you are contributing to improving the sexual and reproductive health and well-being of many women, men and children, and to promoting sexual and reproductive health as a human right.

Donations can be made through the Marleen Temmerman Fund of Ghent University.

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