3rd Congress on Preconception Health and Care

Uppsala, Sweden
16-19 February 2016

Organised by the PrePreg Network and Uppsala University

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INVITED SPEAKERS
IS1. Reduction of maternal and child mortality and morbidity. What’s the role of Preconception care in the Life Course Approach? The WHO PPC recommendations

Valentina Baltag

Dr. Valentina Baltag is responsible for Adolescent Health Policies, Planning and Programmes in the Department of Maternal, Newborn, Child and Adolescent Health in WHO Headquarters. She is the focal point for preconception care in the Department, and a convinced advocate of adolescents’ rights to quality health care services and protective social policies. Dr. Baltag work focuses on supporting Member States to develop and implement policies that address from a life-course perspective the main areas of concern such as SRH, mental health, nutrition, violence etc. She authored publications on preconception care, strengthening primary care, quality of care, and school health services.
IS2. Status of preconception health in the US - An overview of national public health strategies, policy, research and clinical care

Sarah Verbiest

Dr. Sarah Verbiest is the Executive Director of the Center for Maternal & Infant Health and a Clinical Associate Professor in the School of Social Work at the University of North Carolina at Chapel Hill. She is the CDC Senior Consultant for the National Preconception Health and Health Care Initiative and the cofounder of the Every Woman Southeast Coalition, a regional preconception health initiative. She earned her graduate degrees at UNC-CH including a Master’s in Social Work, Master’s in Public Health in Maternal and Child, and a Doctorate in Public Health Leadership from the Dept of Health Policy and Management.
IS3. Status of preconception health policies and recommendations in Europe

Jill Shawe

Jill Shawe is a Clinical Academic Sexual Reproductive Health Nurse and Midwife and is Professor of Maternal & Family Healthcare at the University of Surrey Guildford UK. Prof. Shawe has developed a programme of research (PREPARE) in pre-pregnancy health and care at Surrey collaborating with colleagues from nutrition and metabolic medicine and the NHS. The group including PhD students, are particularly interested in pre-pregnancy and inter-conception health of women with diabetes, women undergoing bariatric surgery and in the preconception health of men. She also has an honorary contract at UCL working with Professor Judith Stephenson on pre-pregnancy projects including 'Smarter Pregnancy'

Pierpaolo Mastroiacovo

Pierpaolo Mastroiacovo is Professor of Pediatrics. He was Chair and Head of Department of Pediatrics at Catholic University, Rome. Currently he serves as Director of the Centre of the International Clearinghouse for Birth Defects Surveillance and Research, and as Chairman of Ethical Committee of Bambino Gesù Children Hospital, Rome. His main interest has been since early ’70ies epidemiology and clinics of birth defects. In this field he published a book and approximately 300 papers. His main current activities are: coordinating research activities on epidemiology of birth defects; developing surveillance programs of birth defects in collaboration with CDC and WHO in developing countries; increasing awareness on primary prevention of birth defects; implement preconception care services in Italy. He also contributed to implement March 3, World Birth Defects Day.
IS5. Preconception health and care in China

Fuqin Liu

Dr. Fuqin Liu is an Assistant Professor at Texas Woman’s University College of Nursing, Denton campus. She teaches across RN-BSN, MS, and doctoral programs. Her overall program of research is related to maternal and child health promotion, specifically preconception health promotion and policies that shape global women’s health care. Dr. Liu’s recent research project is on reproductive health issues among women who have experienced intimate partner violence.
IS6. An overview of the type of research underway in the Netherlands

Eric A.P. Steegers

Professor of Obstetrics and Prenatale Medicine. Erasmus MC, Rotterdam, The Netherlands

Prof. Steegers current research interests relate to the Developmental Origins of Health and Disease paradigm involving the complex pathophysiology of cardiovascular and placental related adverse first trimester outcomes and the consequences for fetal and maternal health as well as disease in later life. New knowledge from translational research in these areas is being disseminated and translated in evidence-based local and national transmural preconception and early pregnancy programs for improved risk selection and general and personalized interventions with a special emphasis on high risk and socially deprived reproductive target groups, in close collaboration with related fields like Public Health.
IS7. Preconception health and health during pregnancy: The Swedish Medical Birth Register

Anna-Karin Wikström

Anna-Karin Wikström is a Consultant Obstetric Physician at the University Hospital in Uppsala. There she is working at the labor ward and antenatal care. She is an Associate Professor and Senior Lecturer at the Department of Women's and Children's Health at Uppsala University.

Her main research focus is on preeclampsia, but hypothyreosis, use of snus during pregnancy and maternal obesity are also main topics of her research. Epidemiological research, and usage of the Swedish national data-bases, is her main method. She is the chairman of the obstetric part of the newly started nation-wide Pregnancy Register.
IS8. Prevention of unwanted pregnancies

Kristina Gemzell Danielsson, MD, PhD

Unsafe abortion is a major contributor to maternal mortality. Therefore effective methods for contraception and safe and acceptable methods for termination of unwanted pregnancies are prerequisites for reproductive health, for gender equality and for the empowerment of women. Safe and effective contraceptive methods and information need to be accessible also by young and unmarried women. Women undergoing an induced abortion or post abortion care should be offered contraceptive provision of their choice on site. New methods for contraception are also needed including improved methods for emergency contraception and new mechanisms of action as well as mode of delivery. Additional health benefits of contraceptive methods such as protection against various cancers, and a wide range of other benefits need to be better recognized. The possible use of progesterone receptor modulators for protection against breast cancer and prevention of uterine leiomyomas and endometriosis should be further explored.
IS9. Men’s health and preconception care

Jill Shawe

Jill Shawe is a Clinical Academic Sexual Reproductive Health Nurse and Midwife and is Professor of Maternal & Family Healthcare at the University of Surrey Guildford UK. Prof. Shawe has developed a programme of research (PREPARE) in pre-pregnancy health and care at Surrey collaborating with colleagues from nutrition and metabolic medicine and the NHS. The group including PhD students, are particularly interested in pre-pregnancy and inter-conception health of women with diabetes, women undergoing bariatric surgery and in the preconception health of men. She also has an honorary contract at UCL working with Professor Judith Stephenson on pre-pregnancy projects including ‘Smarter Pregnancy’.
IS10. Environmental effects on male and female fertility

Matts Olovsson

Matts Olovsson is Professor and senior consultant in Obstetrics and Gynecology at the Department of Women’s and Children’s Health, Uppsala University, Uppsala, Sweden. He is deputy head of the Department of Women’s and Children’s Health at Uppsala University, Program Director of the Medical Program at Uppsala University, ARGUS of the Swedish Society of Obstetrics and Gynecology and he is also heading the National Swedish Endometriosis Center. His research areas includes cervical cancer prevention, different aspects of endometriosis and also effects of endocrine disrupting chemicals on female reproductive functions, mainly effects on the human endometrium.
Violence against women is common in all societies. In a worldwide estimation of violence against women, the WHO stated that more than every third woman (35%) had been subjected to physical and/or sexual violence from an intimate partner and/or sexual violence from a non-partner. Victimization has in many studies been shown to have a serious impact on mental and somatic health and lifestyle behaviours. One of the aspects is to lose control of one’s reproductive life. Unplanned pregnancies and induced abortions have been shown to be more common among victims. For instance, violence can cause women to refrain from using contraceptives, pills might be confiscated or condoms sabotaged or else the partner might stop the termination of an unwanted pregnancy. Preconception care in a wide perspective should include education about reproduction from the early teens and later about contraception and safe sex to keep fertility until pregnancy is wanted, and also family planning for women and men before and in between pregnancies to optimize the health during pregnancy and for the new born baby. There are many opportunities along this way to identify violence victimization and to offer support and alternatives for women, children and men subjected to violence.
IS12. Use of alcohol prior to and in early pregnancy

Hanne Heegard

Hanne Hegard, RM, PhD is Associated Professor at Copenhagen University College of Nursing and Senior Researcher at the Obstetric Clinic, Rigshospitalet, Copenhagen. Her overall program of research is related to maternal and child health promotion, specifically physical activity and mental wellbeing, low back pain and sick leave. Furthermore her research is about lifestyle factors such as use of alcohol and vitamins in the preconception period and during pregnancy.
IS13. Postponing childbirth to advanced maternal and paternal age – who, why and medical impact of postponing childbirth

Lone Schmidt, Associate Professor, DMSci, PhD
Department of Public Health, University of Copenhagen, Denmark

In many developed countries men and women are postponing family formation. The postponement is linked to a number of different factors including women’s education and participation in the labour market, effective contraception, gender equity, and the lack of sufficient family policies. In several countries an increasing proportion of well-educated women remain childless and well-educated women get in average fewer children than lower educated women.

Population-based studies from a number of countries repeatedly shows that a substantial proportion of women and men under-estimate the impact of advanced age on fertility and adverse reproductive outcome, and over-estimate the success rates of fertility treatment. Across the studies a larger proportion of men compared to women has a lack of sufficient knowledge on fertility risk factors. Hence, many people make uninformed decision-makings when postponing family formation to ages where fertility has declined.

Age is the single most important factor on fertility among both women and men. Among women increasing age is significantly associated with reduced egg quality, infertility, adverse pregnancy outcomes as spontaneous abortions, ectopic pregnancies, still births, congenital malformations, and with increased risk of serious medical maternal complications during pregnancy and birth as e.g. venous thromboembolism. Among men, increasing age is associated with reduced semen, infertility or prolonged waiting time to pregnancy, increased risk of spontaneous abortion and congenital malformations. Among women being > 35 years of age increases risks and among men being > 40-50 years increases risk of a negative impact on fertility and reproductive outcome. Even high quality medically assisted reproduction cannot overcome the negative effects of age on fertility.

In conclusion, postponing family formation to ages where fertility has declined increases the risk of infertility, having fewer children than desired, involuntarily childlessness, and adverse pregnancy outcomes.

More men than women desires to postpone family formation to ages where female fertility has declined substantially and more men than women desires a last child when a partner of similar age will no longer be fertile.

The aim is to support that people who desires to become parents are having the best possibilities for achieving their desired number of children. There is a need of informing the population about the risk factors associated with postponement of family formation to advanced ages in order to support well-informed decision-making regarding family formation. We need especially to get the young men on board. Further, we need to discuss in public topics family friendly policies and in many countries to expand the societal possibilities for combring family and work when a large proportion of women are educated and wants to stay at the labour market also when becoming mothers.
IS14. An overview on folic acid and experiences with mHealth intervention programme in the Netherlands

Régine Steegers-Theunissen

Régine Steegers-Theunissen, MD, PhD, is professor in Periconception epidemiology at the Erasmus MC in Rotterdam The Netherlands. She is conducting multidisciplinary and translational research on periconception nutrition and lifestyle, with a focus on the 1-C pathway and epigenetics, and the impact on subfertility, embryopathy, vascular-related pregnancy complications and future health. She implemented her research findings in successful multifunctional device-independent personal mHealth coaching programs, such as ‘slimmer zwanger’ (smarter pregnancy) and ‘slimmer eten met je kind’ (smarter eating with your child). These mHealth platforms are aimed to increase the quality of preconception and antenatal care by improving nutrition, lifestyle, compliance of treatment and health care visits in couples and babies around the world.
**IS15. An overview of dietary habits, nutrient intake and biomarkers for folate, vitamin D, and iodine status among women in childbearing ages in Sweden**

W Becker, AK Lindroos, C Nälsén, E Warensjö Lemming, V Öhrvik.

National Food Agency, Uppsala, Sweden

**Background:** Dietary intake and nutritional status is important for pregnancy and pregnancy outcomes. Dietary advice targeted to women in childbearing age, include folate aiming at prevention of neural tube defects in the offspring.

**Aim:** Describe food and nutrient intake and nutritional status among women in childbearing ages in Sweden in relation to current nutrition recommendations.

**Methods:** Dietary intake was assessed using a web-based 4-d consecutive food record among adults aged 18-80 y - the Riksmaten 2010-11 survey. In a sub-sample of c. 300 subjects (149 women), biomarkers of vitamin D, folate and iodine status was assessed. Results for women, with a focus on ages 18-44 y, are presented.

**Results:** Women in childbearing ages had lower intakes of fruit and vegetables, fish and wholegrain, but higher intakes of soft drinks. Macronutrient composition was generally in line with NNR, except for a lower intake of dietary fibre, and a higher intake of saturated fatty acids and added sugars. For micronutrients, mean reported intakes of vitamin D, folate, iron, and selenium were below recommended intakes, and intakes were generally lower compared to women 45-80 y. Median urinary iodine concentration was 74 µg/L, below cut-off considered sufficient (100 µg/L). Median plasma 25OHD was 65 nmol/L, 20% had levels < 50 nmol/L, indicating insufficient status. Blood folate concentrations were adequate, low status (erythrocyte-folate < 317 nmol/L; plasma-folate < 6.8 nmol/L) were found in a few subjects (3%). Median plasma ferritin concentration was 35 µg/L and 20% had indication of depleted iron stores (≤ 12 µg/L).

**Conclusions:** Women in childbearing ages reported lower intakes of some micronutrients compared to older women. The results indicate that folate, iodine and iron status among women in childbearing ages needs improvements. This can be achieved by following dietary guidelines including use of folic acid containing supplements.
IS16. Implementing the use of the Reproductive Life Plan in clinical settings

Tanja Tydén, RNM, Jenny Stern

Tanja Tydén is nurse-midwife, PhD, and chair of Caring Sciences at Uppsala University. She is clinical professor and combines her scientific work with family planning counselling at the University Hospital. Her research is mainly focused on prevention of sexually transmitted infections, unwanted pregnancies, postponed parenthood and lifestyle in connection with pregnancy.

Jenny Stern, RN, MMSc, PhD, is a junior lecturer and post doc at the Department of Public Health and Caring Sciences, Uppsala University. She recently defended her thesis Preconception health and care – A window of opportunity and is now continuing research within preconception care from a public health and implementation perspective.
Improving preconception health (PCH) and expanding preconception care (PCC) for women and men requires evidence-based systems and tools that can be used by the public and health care providers. These systems must have the capacity to identify and mitigate PCH risks, be health literacy and culturally appropriate, and include an iterative, integrated process with the targeted end users. The developed system should then be tested for its efficacy and effectiveness using robust study designs and analytical strategies. Since 2009 our interprofessional research team at the Family Medicine Department at the Boston University School of Medicine and the College of Computer and Information Science at Northeastern University has been working on an evidence-based internet embodied conversational agent PCH “Gabby” system for African American (AA)/black women, given persistent health disparities in the United States. The Gabby system is customized to each user and applies motivational interviewing, shared decision making stages of behavioural change tracking to help mitigate identified PCH risks. It is an empowering and engaging stand-alone system which has already been tested with a randomized controlled trial (RCT) and is undergoing a larger RCT so it can transition from a research tool to real world use, particularly in programs to improve perinatal outcomes and by clinicians as an adjunct to their management of patients in the preconception period.

During this presentation an overview of the Gabby system development as reflected in the four versions will be presented with a focus on findings from the first two completed versions (V1 and V2) and a summary of the ongoing second larger RCT (V3) and continued enhancements in V4. We will also provide a glimpse at the Gabe system being designed to promote preconception health for young black men.

For the Gabby V2 RCT, 100 nongravid AA women 18 –34 years of age were screened for over 100 PCH risks and randomized to the Gabby or control group. The Gabby group interacted with the system for up to six months; the control group received a letter indicating their health risks with a recommendation to talk with their clinician. There were 23.7 (SD 5.9) PCH risks identified per participant. The numbers, proportions, and types of risks were compared between groups revealing that the Gabby group had greater reductions in the number (8.3 vs. 5.5 risks, p < .05) and the proportion (28% vs 21%, p < 0.01) of PCH risks than controls. The majority of women in the Gabby group found her easy to talk to and they used information from Gabby to improve their health. Our ongoing V3 and V4 studies and future Gabby research will determine if Gabby can benefit higher risk populations and if the PCH risk reduction is clinically significant.
IS18. Life-course approach – main actions during preconception period

Gunta Lazdane

Gunta Lazdane is an obstetrician and gynaecologist, Ph.D and has been Professor, Head of University Department in Riga Stradins University, Latvia. Since 2003 she is working in the WHO Regional Office for Europe as the Programme Manager, Sexual and Reproductive Health in the Division of Noncommunicable Diseases and Promoting Health through the Life-course. She is assisting 53 WHO Member States in the European Region to improve sexual, reproductive, maternal and newborn health through promoting good health at key stages of life, taking into account the need to address social determinants of health and gender, equity and human rights.

Dr. Lazdane has participated in many European and global conferences and congresses including International Conference on Population and Development in Cairo in 1994. She is the Chief Editor of the European Magazine for Sexual and Reproductive Health Entre Nous.
IS19. Ethical and gender issues in preconception counselling and care

Ulrik Kihlbom

This talk will begin with an overview of ethical issues in preconception care (PCC). It will focus upon the question of what legitimate purpose(-s) and benefit(-s) PCC may serve. The case in point is preconception genetic carrier screening (PCS) but the argument will probably apply to other forms of preconception care (PCC) as well. It is commonly argued that enhancement of reproductive is the proper justification of PCS. I will argue that this is a highly problematic view and equally problematic way to present PCS. Health care institutions should acknowledge the health goals that underlie PCS.
IS20. Improving the Health of Generations: Moving Preconception Health from Theory to Action

Brian Jack, MD and Karla Damus PhD, MSPH, BSN, RN

Department of Family Medicine
Boston University School of Medicine

The content of preconception care (PCC) is now defined and there are a variety of innovative public health programs that are initiated around the world. We will discuss how the future of PCC includes the need to (1) create tools to assist clinicians to deliver preconception care in the clinical setting, (2) design group and school based programs, and (3) invent new health information technology to deliver PCC services, and (4) educate clinicians to provide PCC programming for high risk families and men. We will also provide a framework for how PCC can impact ethnic and racial disparities in maternal and child health (MCH) outcomes, particularly low birth weight and preterm delivery. We ask whether PCC for women before pregnancy is enough to impact racial disparities. Evidence will be presented to support the need to expand our concept of PCC to include programming that impacts prior generations in order to maximally improve racial disparities. We will present the view that intrapartum, antenatal and perhaps preconception care are effective in improving many clinical outcomes, but that these activities are necessary but not sufficient to impact racial disparities. Concepts from the Barker and weathering hypotheses, the “healthy immigrant” effect and the life course theory will be presented. We will then discuss data showing that environmental, societal and racial stress can perhaps impact MCH outcomes, potentially for several generations. Finally, we will present some emerging evidence that epigenetic changes in response to stress might be related to multigenerational impacts – providing both an explanation for racial disparities and a target for future research.
IS21. What are the Preconception Care needs among young adults?

Ilse Delbaere

Lector ‘Evidence Based Midwifery’ and researcher, Vives University College, Kortrijk, Belgium.

Dr. Ilse Delbaere’s current research area relates to preconception care and fertility awareness. She was involved in the development of the Flemish website ‘Gezondzwangerworden.be’ and is currently webmaster for this website. She implemented a preconception consultation at the University Hospital of Ghent. She is supervising a PhD-project on preconception care and was involved in numerous Master’s thesisses on this subject.
IS22. Am I fertile or not? Experiences from a fertility assessment and counselling clinic in Denmark/Sweden

Britt Friberg

Britt Friberg is Associate Professor of Obstetrics and Gynaecology at Lund University, Lund, Sweden and senior consultant in Obstetrics and Gynaecology at Reproductive Medicine Centre, Skåne University Hospital, Malmö, Sweden. She is a member of the Swedish Tissue Group for gametes and has experience from fertility assessment and counselling.
IS23. Social egg freezing – Who benefits from putting the family life on ice?

Outi Hovatta

Outi Hovatta is professor in Obstetrics and Gynaecology, especially Assisted Conception, at Karolinska Institutet. Her research interest is mainly in infertility problems, the genetics behind it and the generation of optimized treatments for infertility. Maturation of eggs follicles in vitro is one of Prof. Hovatta’s main research areas. Since 2001 she started work in human embryonic stem cells, working specially with the generation of methods that may allow the cells to be use in clinical trials related with cell replacement therapies.
IS24. European consensus on interconception care

Meertien Sijpkens
FREE COMMUNICATIONS

Norita Hussein, Nadeem Qureshi

Background: Reproductive genetic screening or testing during pregnancy often leaves women or prospective parents with restricted reproductive options. Identifying genetic risk before pregnancy could provide a more appropriate timeframe for informed decision-making and expands reproductive options. The importance of primary care involvement is increasingly highlighted. Possible GPs’ roles are identifying individuals at risk, providing support and counselling, and referring to specialists when appropriate.

Aim: To explore GPs’ practices and preparedness in the assessment of reproductive genetic risk before conception, in the existing primary care practice.

Methods: A cross-sectional self-administered questionnaire survey was carried out on GPs working in Counties Nottinghamshire and Derbyshire, United Kingdom. The questionnaire was developed from qualitative data of focus groups and literature review.

Results: The overall response rate was 33%. Approximately half (56%) indicated that family history of reproductive genetic risk was discussed with women planning pregnancy and only about one third (38%) had discussed routinely during consultation. Of the respondents, less than half carried out preconception advice about genetic carrier testing in women known to have family history of genetic conditions (44%), women planning pregnancy (33%), and women of certain ethnicity (31%). Nevertheless, further enquiries indicated that 74% of the respondents were prepared to offer genetic carrier testing if appropriate to the consultation, 63% were prepared to offer at-risk women and 65% were willing to counsel about genetic testing results if given prior training on preconception genetics. Lack of awareness among women about preconception health is the main perceived barrier (91%), followed by the difficulty to capture women to seek for preconception advice (77%) and GPs’ limited training in preconception genetics (64%). A substantial proportion of the respondents indicated that family planning clinic was the most preferred setting to deliver preconception assessment of reproductive genetic risk (70%), followed by preconception clinic (52%), well-woman clinic (44%) and routine clinic consultation (34%). Majority of the respondents believed that training program was essential (93%) as well as provision of national guidelines (82%) to assist and facilitate the practice.

Conclusion: It is encouraging that GPs in my study were already offering preconception advice on reproductive genetic risk opportunistically. Although the proportion is low, more than two thirds of the respondents were prepared to offer preconception assessment of reproductive genetic risk. Family planning clinic was viewed as the preferred setting to deliver preconception assessment of reproductive genetic risk. Since the GPs’ primary concern is difficulty to capture women to go for preconception assessment, it would seem feasible to reach them through family planning clinics.
O3. Fertility awareness in the Flemish population: optimism can be disadvantageous.

Delbaere Ilse, Vanderplancke Tine, Bogaerts Annick, Provoost Veerle, De Sutter Petra, Tydén Tanja

**Background:** There is an increasing trend to postpone parenthood in Western countries. This trend impacts both pregnancy outcome and fertility rates (Leridon, 2004). It can be wondered whether the population is sufficiently aware of the risks associated with delay of parenthood and whether couples take an informed decision if they decide to postpone parenthood.

**Aim:** The purpose of this research is to investigate whether Flemish adolescents, students and people of reproductive age have sufficient fertility-related knowledge in order to make informed decisions about timing of parenthood.

**Methods:** This study has a cross-sectional design. We translated ‘The Swedish Fertility Awareness Questionnaire’ (Lampic 2006) and sent it to 989 adolescents (mean age 15 years), 348 students (mean age 23 years) and 374 persons of reproductive age (mean age 35 years, range 25-45 years).

**Results:** The majority of Flemish adolescents, students and people of reproductive age believe that female fertility starts to decline after the age of 35 years. More than 50% of Flemish adolescents believe that there is a marked decrease in female fertility after age 50. Thirty-five percent of Flemish students believe there is a marked decrease in female fertility at age 40-44, 12% think there is a marked decrease at age 45-49 and 20% think there is only a marked decrease after the age of 50. Similar results are found in people of reproductive age. The majority of the Flemish population believes that there is a 40-100% chance to become pregnant in one ART-cycle.

**Conclusion:** Our findings show that the Flemish population is insufficiently aware of risks associated with delay of parenthood. It can be wondered whether the population takes an informed decision if they decide to postpone parenthood.
O5. Initiating Patient Discussions about Oocyte Cryopreservation: Examining OB/GYN Resident Attitudes, Intentions, and Fertility Awareness

B. Peterson, L. Yu, J.K. Boehm, A. Hodgson, M.C. Inhorn, P. Patrizio

**Background:** Although women prefer to receive reproductive information from their health care providers, little is known about physicians’ attitudes toward initiating discussions of oocyte cryopreservation (OC). Furthermore, many women report receiving information about OC at older ages when their maximum reproductive potential has passed.

**Aim:** To understand the attitudes and intentions of OB/GYN residents in initiating patient discussions of OC and age-related fertility decline.

**Methods:** OB/GYNs in residency programs in the United States were sent an online survey and 208 completed it. The study gathered information about resident attitudes, fertility awareness, and willingness to initiate patient discussion of OC and age-related fertility decline. Participants were evenly distributed between post-graduate years 1-4, 91% were women, and 75% were 26-30 years old.

**Results:** Forty percent (n=83) believed OB/GYNs should initiate discussions of OC with patients (initiators), while 60% (n=125) did not (non-initiators). Initiators did not differ from non-initiators in their familiarity with the procedure or whether or not their institution offered it. Initiators were more likely to believe that OB/GYNs should initiate discussions about age-related fertility decline (p < 0.0001), and that OC could be discussed as part of annual well-woman exams (50% initiators vs. 1% non-initiators; p < 0.0001). Initiators and non-initiators did not differ in their attitudes toward discussing OC with patients undergoing cancer treatments; however, initiators were significantly more likely to discuss elective OC with patients who were unpartnered or desired to delay childbearing to pursue a career (p < 0.0001).

**Conclusion:** OB/GYN residents who would initiate patient discussions of OC are also more likely to initiate discussions of age-related fertility decline and elective OC. Discussing these topics can improve patient education and assist patients in making more informed reproductive decisions. Further research is needed to assess the existing barriers to such discussions from physician and patient perspectives.
**Background:** Preconception care is known to be effective in changing pregnancy-related risk behavior and in enabling timely diagnosis of pregnancy risk factors. It is, however, difficult to reach and inform couples about preconception care. This is specifically true for the low SES group who will benefit most from a preconception care. Hence, new strategies to reach this group are needed.

**Aim:** To develop an online preconception care decision tool 'nietofwelzwanger.nl' aimed at young adults of low educational level (15-24 year of age) to make them aware of choices they can make about healthy pregnancy or preventing pregnancy.

**Methods:** The tool was designed in co-creation with female members of the target population. Focus group interviews provided insight into the way young adults search and use the internet and what they find important in using a website. During the building phase of the tool young adults were asked in 3 consecutive usability tests for their opinion: 1) regarding preferences in layout and tailoring, testing two concepts; 2) to test whether the content and looks matched the expectations of users; 3) user interaction of the actual website focusing on navigation.

**Results:** Key elements reported prior to the development were the preference for visual support (eg video), logical navigation, desire to be taken seriously and preference for interactions (quizzes). From the concept and usability tests it was clear that respondents were very positive about the tool; it did fit with their expectations, the navigation was well understood, and the content was seen as personally relevant.

**Conclusion:** We successfully developed a preconception care decision tool to assist young adults to make choices about healthy pregnancy or preventing pregnancy. The next step is to use this tool during classes at intermediate vocational education and evaluate its effects on informed choice concerning use of preconception care.
O8. Use of Smarter Pregnancy m-health intervention by women planning a pregnancy in East London

Dilisha Patel, Caroletha Irish, Regine Steegers-Theunissen, Jill Shawe, Kathryn Hart, Ros Bryar, Nataliya Brima, Andrew Copas & Judith Stephenson

**Background:** We have little empirical evidence from women who are planning their pregnancy about their opinions on how to support them in preconception care. Colleagues in the Netherlands developed an m-health preconception intervention, Smarter Pregnancy (Slimmer Zwanger) to improve diet and lifestyle behaviours. It has been successfully used in IVF clinics.

**Aim:** To assess the feasibility of Smarter Pregnancy use by women planning a pregnancy in East London.

**Methods:** Women who were planning another baby were recruited to use Smarter Pregnancy. A sub-sample of women undertook in-depth interviews, sharing their opinions of using Smarter Pregnancy and thoughts on preconception care.

**Results:** Majority of the women expressed they enjoyed using Smarter Pregnancy; they found it was successful at motivating them to improve their behaviours. “when this actually came along, it actually really...truly, it encouraged me in terms of eating healthy because you know, exercise and eating healthy helps you because you change your lifestyle completely.” Women conveyed that there is a gap in knowledge with regards to preconception care. “We’ve not had something like this before and I felt like, at that time when I wanted to get pregnant, you know you don’t know, even though you’ve had three kids already before, you just forget everything.” “most people think, oh, I want to get pregnant; most people don’t even know where to go to get the help when it comes to pregnancy.”

**Conclusion:** Women mostly embraced Smarter Pregnancy welcoming this support, particularly as their previous experience of preconception health information was limited to unreliable internet searches and word of mouth. Being online, Smarter Pregnancy offered women privacy which was highly valued as women seldom want share with others that they are planning a pregnancy. There is a demand from women for support in healthy behaviours in their preconception period.
O12. School-based intervention for the prevention of HPV among adolescents: a randomised controlled study

Maria Grandahl, Andreas Rosenblad, Christina Stenhammar, Tanja Tydén, Ragnar Westerling, Margareta Larsson, Marie Oscarsson, Bengt Andrae, Tina Dalianis, Tryggve Neveus

**Background:** Vaccination against human papillomavirus (HPV) is one important factor for preconception health and care. In Sweden a national vaccination programme for girls was implemented in 2012.

**Aim:** To improve primary prevention of HPV infection by promoting vaccination and increased condom use among upper secondary school students at time for the general health interview with the school nurse.

**Methods:** Randomised controlled trial among upper secondary schools (n=18). Participant schools were first randomised to the intervention or the control group, after which individual classes were randomised to be included or not. 832 students, both boys and girls aged 16 were invited to participate and in the end, 741 (89.1%) students completed the study. The intervention was based on the Health Belief Model (HBM). According to HBM a person’s health behaviour can be explained by individual beliefs regarding health actions. School nurses delivered 30 minute face-to-face structured information about HPV, including cancer risks and HPV prevention, i.e. condom use and HPV vaccination. Students in both groups completed questionnaires at baseline and after three months.

**Results:** The intervention had positive effect on behaviour: girls in the intervention group chose to have themselves vaccinated to a significantly higher degree than the controls (p=0.02). There was also a significant effect on HBM total score (p=0.003), students in the intervention group had more favourable beliefs compared to the controls. The influence on the HBM parameters susceptibility and severity were also significant (p<0.001 for both variables). In addition, the intervention had significant effect on the intention to use condom (p=0.004).

**Conclusion:** The school-based intervention increased HPV vaccination rates and had favourable effects on beliefs towards primary prevention of HPV in a diverse population of adolescents. These results provide the scientific support for the implication of nation-wide educational interventions with the potential to improve preconception health.
O13. Accessible preconception care for women with low health literacy: A problem analysis

Mirjam Fransen, Ageeth Rosman, Miriam Hopman, Marie-Louise Essink-Bot

**Background:** Women with a low socioeconomic background have an increased risk of perinatal problems. Preconception care has the potential to reduce this risk, but tends to be underutilized by these women that often have low health literacy, i.e. skills to assess, understand and use health-related information in ways that promote and maintain good health.

**Aim:** The aim of this problem analysis was to explore the accessibility and effectiveness of preconception risk assessment and counselling among women with low health literacy in the Netherlands.

**Methods:** In 72 face-to-face interviews we explored determinants of participation in preconception counselling in a pilot program in the Netherlands (Healthy Pregnancy 4 All). We assessed awareness and comprehension of written invitations, and considerations, attitude and intentions regarding participation in counselling. Comprehensibility, usability and relevance of an online risk assessment tool was explored in 27 qualitative interviews.

**Results:** Women were relatively unaware of the concept of preconception counselling. The receipt of written invitations was low. After reading the invitations during the interview, the majority understood the content and aim of the counselling and had a positive attitude towards participation. Most important reasons not to participate included perceived sufficient knowledge and perceived low risk of perinatal problems. The online risk assessment was considered to be relevant, comprehensible and usable. However, certain items were insufficiently understood, and women did not use the option to gain explanatory information.

**Conclusion:** Although women with low health literacy are interested in risk assessment and counselling, they are unaware of the concept of preconception care. We are currently using the results of this problem analysis to develop and evaluate strategies to enhance informed participation in this group.
O14. Swedish Healthcare Providers’ Perceptions of Preconception Genetic Carrier Screening (PCS)- A Qualitative Study

Amal Matar, Ulrik Kihlbom, Anna T. Höglund

**Background:** Preconception genetic carrier screening (PCS) is a new approach to screen couples in the general population, without priori risk and planning pregnancy, for autosomal recessive traits. A couple would be screened for many conditions via expanded screening panels at one go. This technique is currently being piloted in the Netherlands but it has not been implemented in Sweden.

**Aim:** To explore and describe the perceptions of PCS via expanded panels among Swedish healthcare providers, with focus on the ethical aspects of the technique.

**Methods:** Eleven healthcare professionals, including clinicians, geneticists, a midwife and a genetic counselor, from academic and clinical institutions in mid-Sweden were interviewed in depth, using a semi-structured questionnaire. The interviews were recorded, transcribed verbatim and content analyzed for categories and subcategories.

**Results:** The participants expressed ethical concerns regarding discrimination, medicalization, prioritization of healthcare resources and effects on reproductive freedom. Finding resources for PCS was regarded as expensive and burdensome for the Swedish healthcare system. To reach informed consent with expanded panels was also seen as a challenge. Furthermore, it was seen as a risk that parents would feel a pressure to test, would PCS be implemented. Finally, participants also expressed worries that PCS would increase medicalization and strive for control of pregnancy and parenthood. However, it was also mentioned that PCS might enhance reproductive autonomy and could reduce abortion incidence, since it allows parents to opt for reproductive decisions. Also, it may reduce workload off obstetricians dealing with intrauterine fetal diseases because such conditions could decrease.

**Conclusion:** Participants nurtured many ethical and non-ethical concerns regarding PCS that may affect the uptake and usage within the Swedish healthcare system. The results give insight to ethical concerns that may be necessary to take into account should PCS be implemented in Sweden.
O19. Pregnancy Preparation and Health-Related Behaviors

Poels, M., van Stel H.F., Koster, M.P.H.

Background: Preconception Care (PCC) has demonstrated to decrease risk behaviors for adverse pregnancy outcomes. Perceived sufficient knowledge is suggested to be an inhibiting factor for the use of PCC. Yet, little is known about women’s capabilities to reduce preconception risk factors based on self-acquired information.

Aim: The aim of this study was to assess the association between pregnancy preparation (self-acquired information and preconception care (PCC) consultation) and changes in preconceptional health-related behavior.

Methods: We performed a crosssectional study among 283 women who received antenatal care at a Dutch community midwifery practice. Questionnaires were collected from February-April 2014. Data were analyzed using univariate and multivariate logistic regression analyses. The association between pregnancy preparation and lifestyle changes was adjusted for age, BMI and educational level.

Results: Almost 60% (n=160) of women acquired preconception information themselves, and 25% (n=68) consulted a healthcare provider regarding their pregnancy wish. The former group was significantly more likely to quit drinking (adjusted OR 5.46 (95% CI 1.76-16.96)), improve their diet (adjusted OR 7.84 (95% CI 3.03-20.30)) and use folic acid (adjusted OR 3.90 (95% CI 2.00-7.62)) compared with women who did not prepare for pregnancy. Women who (also) consulted a healthcare provider were significantly more likely to quit smoking (adjusted OR 26.34 (95% CI 2.30-301.35)), improve their diet (adjusted OR 8.99 (95% CI 3.20-25.24)) and use folic acid (adjusted OR 4.34 (95% CI 1.93-9.72)) compared with women who did not prepare for pregnancy.

Conclusion: Gathering preconception information, either by women themselves or by means of a PCC consult, increases the likelihood of women positively changing health-related behaviors prior to pregnancy recognition.
O20. Parental Perspectives on the Delivery of Preconception Care

Poels, M., Koster, M.P.H., van Stel H.F.

**Background:** The attention for Preconception Care (PCC) has grown substantially in recent years, yet the implementation of PCC appears challenging as uptake rates remain low. Therefore, it is important to identify how PCC can best be delivered in order to improve its uptake.

**Aim:** The objective of this study was to assess parental perspectives on how PCC should be provided.

**Methods:** Recruitment of participants took place among couples who received antenatal care at a Dutch community midwifery practice. In June and September 2014, five focus groups were held with 29 women and one focus group with 5 men. The focus groups were audio-taped, transcribed verbatim and analyzed using NVivo 10 software.

**Results:** Participants were generally unfamiliar with the concept of PCC. The common notion was couples have to try conceive for over one year before they consult a healthcare provider. Therefore, it was proposed to raise awareness by means of a promotional campaign, stipulating that PCC is suited for every couple with a (future) child wish. Suggestions were made to display marketing materials in local settings. It was recommended to make PCC more accessible by offering multiple forms: group sessions, individual consultations, walk-in-hours and online sessions. It was urged to involve male partners in PCC. Opportunistic offering PCC by healthcare providers was considered acceptable when the subject was deliberately raised. This meant not straightly asking about the presence of a child wish, yet to mention PCC while discussing chronic illness, lifestyle risks or drug prescriptions. GP’s or midwifes were regarded the most suitable PCC providers. However, provider characteristics such as experience, empathy and communication skills were considered more important.

**Conclusion:** From the parental perspective it is recommended to address every couple with a (future) child wish by means of enlarging the accessibility and awareness of PCC.
O26. Non-pregnant women's voices on alcohol consumption before and during pregnancy

Janna Skagerstrom, Elisabet Häggström-Nordin, Siw Alehagen

**Background:** Human embryos are vulnerable to alcohol teratogenicity from early pregnancy, including time point before pregnancy recognition for many women. In Sweden it is common that women consume alcohol around conception and until pregnancy recognition.

**Aim:** The aim of this study was to explore the voice of non-pregnant women concerning alcohol consumption and its relation to pregnancy.

**Methods:** Seven focus group interviews were conducted with 34 non-pregnant women who did not have children. The women were aged 17-34 years. The semi-structured interviews were analysed using thematic analysis.

**Results:** In the analysis three main themes were identified: an issue that cannot be ignored; awareness and uncertainty concerning alcohol and pregnancy; and transition to parenthood. A societal expectation to drink alcohol was prevalent and alcohol was an integral part of the women’s lives. The women used different strategies to handle this expectation. Most women agreed on not to consume alcohol after pregnancy recognition and stated that total abstinence was the responsible option. However, drinking in the periconceptional period generated more widespread opinions. The women expressed that their knowledge on the specific consequences of drinking in different periods of the pregnancy was scanty and wished for more information.

**Conclusion:** When women become pregnant social expectations concerning their alcohol intake change from an expectation to drink to an expectation to abstain. Although an opinion for zero tolerance during pregnancy was central among the participants, their knowledge regarding consequences of drinking during pregnancy was sparse. In order for prospective mothers to make informed choices, there is a need for information on the relationship between alcohol consumption and foetal development to be delivered before pregnancy occurs.
O27. Attitudes towards family formation in cohabiting and single childless women in their mid- to late thirties

Randi Sylvest; Kathrine Birch Petersen; Anders Nyboe Andersen; Anja Pinborg; Helene Westring Hvidman; Lone Schmidt

Background: In the past 30 years, the reproductive pattern in Europe has changed; women’s and men’s age at first child have increased. Delayed childbearing is associated with adverse reproductive outcomes.

Aim: This study aimed to explore attitudes toward family formation in childless women of advanced age and the potential differences between cohabiting and single women.

Methods: Semi-structured qualitative interviews with 20 women aged 34-39 years attending the Fertility Assessment and Counselling Clinic, Rigshospitalet, Copenhagen. A sample of 10 cohabiting women and 10 single women was chosen. The interviews took place between March and September 2014. Purposeful sampling with maximum variation was used. Data was analysed using content analysis following Graneheim and Lundman.

Results: Our Results displayed a conflict of choosing parenthood characterised by a fear of the consequences in terms of changed life conditions on one hand and an awareness of the biological clock and the dream of the nuclear family on the other. The perception of perfect mothering tended to be idealised in terms of uncompromising expectations of child-rearing. Compared to earlier studies, we observed an increased awareness of solo-motherhood as a possible solution to advanced age and single status.

Conclusion: Our study contributes to the knowledge and understanding of the personal considerations in relation to childbearing in nullipara women in their mid- to late thirties. Well-educated women postpone pregnancy despite their knowledge of a declining female fecundity with increasing age and the wish of children. Their considerations are mainly focused on the consequences of children in terms of change of life conditions and the lack of personal freedom, although children and family are described as the meaning of life. There is thus an internal conflict of choosing parenthood. This knowledge may facilitate fertility assessment and counselling of individuals and aid in addressing these issues in the public domain.
O28. Fertility and childbearing - experiences, thoughts and attitudes. A further piece to the puzzle?

Malin Söderberg

Background: Delayed childbearing in high-resource countries has been reported among young adult women. Factors reported to have impact on this delay are, to be mature enough, to complete studies, and economic uncertainty. The understanding of female fertility among university students in Sweden and Canada is deficient, especially regarding when female fertility declines and how this affects the chances of becoming pregnant.

Aim: To describe experiences of fertility, interpret thoughts on childbearing, and compare attitudes to fertility and childbearing with Background: characteristics, among women not yet mothers.

Methods: Four studies were conducted with Swedish women 20-30 years of age. Two qualitative interview studies; to describe women’s experiences of fertility, and to interpret women’s thoughts on childbearing. Statements were constructed from study 1 and 2, and explorative factor analysis with principal component analysis was used to develop an instrument (3). In study 4 a validation of the instrument, principal component analysis was used, Student’s t-test and ANOVA was performed between components and women’s Background: characteristics.

Results: Fertility is experienced in the present as a possibility. Childbearing is stagnant to freedom in present life and is thought of as a project for future initiated in present time, relevant to female identity. In this population age, occupation, residential area, and civil status play a role in attitudes toward fertility and childbearing. The three components of the Attitudes to Fertility and Childbearing Scale (AFCS) were Importance for future; Hindrance at present; and Female identity.

Conclusion: To meet the information and knowledge gaps among women regarding fertility we must start early, preferably in school. Fertility awareness and menstrual cycle health should be introduced. In Sexual and reproductive health-promotion, and contraceptive/PAP-smear screening encounters with women, the experience of fertility as a possibility should be supported and include strengthening dimensions of female reproductive health.
O31. An ethical perspective on preconception care

Hafez Ismaili M’hamdi

An increasing amount of evidence elucidates the pathways through which social and environmental factors become biologically impinged, thereby increasing the risk of poor pregnancy outcomes as well as non-communicable diseases. This accumulation of scientific evidence raises questions of justice, parental autonomy and societal responsibility. Research is showing that parental lifestyle factors in the periconceptional period play an influential role in the epigenetic programming of the fetus, increasing the risk of a whole array of diseases which can manifest during infancy or later during adult life. Optimizing the periconceptional lifestyle of future parents promises to yield great health benefits for future children as well as the parents themselves. However, since the risk factors for adverse health outcomes are increasingly controllable and avoidable as is made clear by research, the ethical challenge is to provide a fair distribution of the responsibility to avoid these risk factors. That is to say, should the burden to decrease risk factors through an optimized lifestyle fall squarely on future parents since ultimately they make the choices that may harm or benefit the health of their future children? Or should the increased knowledge about the prevention of risk factors lead to a more comprehensive and government coordinated introduction of preconception care, putting the responsibility for perinatal health on the social agenda? Contrary to what many tend to deduce from scientific evidence, the fact that parents can influence the health of their future children does not imply that the sole responsibility for this health lies with these future parents, suggesting that governments carry less responsibility. I will argue that governmental responsibility becomes even stronger when the social economic factors that lead to unhealthy lifestyles as well as poor pregnancy outcomes are taken into consideration.
O33. Raising men’s fertility awareness by RLP counselling

Maja Bodin, Tanja Tydén, Lisa Folkmanson Käll, Margareta Larsson

**Background:** Young men in Sweden are unaware of how sexual risk-taking can negatively affect their own and their partner’s reproductive health. Thus, there is a need to increase fertility awareness. Reproductive Life Plan (RLP) is a health-promoting tool developed to encourage people to reflect over their reproductive intentions and find strategies for successful family planning. The effectiveness of RLP has not yet been evaluated in clinical studies with men.

**Aim:** To evaluate whether RLP-based counselling can increase men’s fertility awareness, and to evaluate men’s experiences of the counselling.

**Methods:** An ongoing RTC conducted at two clinics for STI prevention in Mid-Sweden. The study Aim: s to include 200 Swedish speaking men aged 18-50 years. The baseline questionnaire contains questions about family planning intentions, and knowledge of reproduction and lifestyle in connection to fertility. All participants attain standard care. In addition, men in the intervention group (n=100) receive oral and written RLP-based information from a midwife. Follow-up is conducted by telephone 2-3 months later.

**Preliminary Results:** To date, the study includes 191 men at baseline and 152 at follow-up. At baseline, about 50-60% of all participants were aware that male fertility could be affected by smoking, alcohol, drugs and diet. There was low awareness of other significant factors, such as STI’s. At follow-up, 70-85% in IG mentioned smoking, alcohol, drugs and diet, but awareness of other factors was still low. The acceptance of the RLP-counselling was high, and most men felt comfortable with discussing their RLP with a midwife.

**Preliminary Conclusion:** The counselling was well received but had a moderate effect on fertility awareness. The fact that participants attended the clinic for a different reason probably affected their readiness to learn. Alternative ways of reaching out to men in reproductive age should be considered, such as interactive websites and mobile phone applications.
O35. Facilitators and barriers for Successful Implementation of Interconception Care in Preventive Child Health Care Services in the Netherlands

M.K. Sijpkens, A.N. Rosman, E.A.P. Steegers

Background: Successful implementation of preconception care and interconception care contributes to optimizing pregnancy outcomes, the health status of children and women’s health. Interconception care could be delivered by services in the postpartum period concerned with maternal and child well-being. Interconception care as part of Preventive Child Health Care has been described in several projects and policies, yet despite its opportunities it is not implemented in daily practice in The Netherlands.

Aim: The purpose of this study was to identify facilitators and barriers for implementation of interconception care in Preventive Child Health Care services for 0 to 4 year-olds.

Methods: We organized four focus groups in which consecutively Preventive Child Health Care physicians and nurses, related health care professionals and policymakers participated. A semi-structured interview approach was used to guide the discussion. The transcribed discussions were content-analysed.

Results: All four groups agreed that several facilitators are present, like the unique position of Preventive Child Health Care services to reach women and their expertise in preventive health care. However, identified barriers include unfamiliarity with interconception care among patients and health care providers, as well as lack of consensus about the concept of interconception care and how it should be organized. A widespread message, general agreement or a guideline for standard procedures and local adaptation were identified as novel facilitating factors for future implementation.

Conclusion: This study provides a comprehensive overview of potential facilitators and barriers for the implementation of interconception care in Preventive Child Health Care services or comparable settings. These factors have to be targeted within implementation strategies to strive for successful implementation of interconception care. Future research should then evaluate the feasibility and effectiveness of these implementation strategies when put in practice.
O36. Consumer preferences as a point of departure for social marketed individual preconception care consultations

S.F. van Voorst, C.A. ten Kate, L.C. de Jong – Potjer, E.A.P. Steegers, S. Denktaş

Background: Preconception Care consultations are recognized as a method to promote perinatal health. However, prospective parents underutilize preconception care consultations. A consumer oriented approach to the delivery of PCC consultations may promote its uptake.

Aim: The aim of this study is to develop a basis for a social marketing framework to tailor the promotion and content of individual preconception care consultations.

Methods: Semi-structured interviews were performed with 39 women to identify women’s views regarding the 4 components of the social marketing model: product, place, promotion and price. Content analysis was performed by systematic coding with NVIVO software for qualitative studies.

Results: The 39 participants reflected a multiethnic intermediately educated population. Product: Many participants lack knowledge of, need and perceived benefit of the product. Regarding the content of preconception care consultations, they wish to address fertility concerns and social aspects of parenthood. Preconception care was seen as an informing and coaching service with a predominant role for health care professionals. Place: the General Practitioner and midwife setting was the most mentioned setting. Logistics should meet preferences of the working population. Promotion: A professional led promotion approach was preferred. Several moments were identified as suitable for opportunistic promotion of preconception care consultations. Price: Costs will lead to reconsideration of needs, especially amongst vulnerable women.

Conclusion: Current delivery of preconception care consultations needs to be adjusted to meet preference of women and to promote utilization. Emphasis should lie in changes in the product and the promotion component. The latter requires collaboration with public health care setting.
O37. Anxiety and depression among sub-fertile women.

Lana Salih Joelsson, M.D., Jenny Stern, R.N., M.Sc., Andreas Rosenblad, Ph.D., Kjell Wånggren, M.D., Ph. D. , Anna Berglund, M.D., Ph.D., Tanja Tydén, R.N., Ph.D.

Background: Fertility problems and assisted reproductive technology (ART) treatments has been associated with psychological stress. Little is known whether these symptoms persist when treatment results in a pregnancy.

Aim: The main aim was to investigate symptoms of anxiety and depression among sub-fertile women in Sweden. The Aim: was also to compare sub-fertile women with women who conceived after (ART) and/or women who conceived naturally.

Methods: Sub-fertile women (n=468) answered a questionnaire at their first visit to fertility clinics and pregnant women (n=3155) at registration at antenatal clinics. The Hospital Anxiety Scale (HADS) and Edinburgh Depression Scale (EDS) with cut-off >12 for infertile women and a cut-off >14 for pregnant women were used. Data were analyzed using $\chi^2$ tests.

Results: Among the pregnant women, 152 had conceived after ART and 3022 had conceived naturally. One out of four (23.3%, n=108) sub-fertile women had (HADS-A scores >10) compared to 7.3% (n=11) pregnant women who conceived after ART and 7% (n=211) of pregnant women who conceived naturally (P< 0.001). The EDS scores among infertile women were >12 in 15.7% and >14 in 5.3% of pregnant women after ART (P<0.001). Women who conceived after ART did not score differently for anxiety and depression compared to women having conceived naturally.

Conclusion: The high scores among sub-fertile women can pose challenges not only for the patient, but also for the infertility treatment team. Early preconception counseling and psychological support for sub-fertile women is advisable to decrease the surge in depression/anxiety.
O38. Fertility/Infertility knowledge of medical students: challenges of medical education in Ukraine

Iryna Mogilevkina, Jenny Stern, Tanja Tydén

**Background:** Knowledge of medical students in fertility/infertility may affect their own parenthood plans and those of population for whom they will serve as future health care providers. Fertility/infertility is a part of clinical level university curriculum in Ukraine. If classes provide sufficient knowledge on this issue is not known.

**Aim:** To compare knowledge of fertility/infertility among pre-clinical (1st-3rd years) with those of clinical (4th-6th years of the study) level students.

**Methods:** A classroom survey was conducted among randomly selected groups of 3568 Russian-speaking medical students in 2012. Among 1267 students approached, 729 were at pre-clinical (67% females) and 538 (69% females) at clinical level.

**Results:** No pronounced improvement was found in fertility/infertility knowledge of clinical as compared with pre-clinical students. Only around 45% of students considered 20-24 years as most fertile age (p=0.07). 71% of pre-clinical and 62% of clinical students believed that some decline in female fertility starts only after 34 years old (p=0.005). Pronounced decline in female fertility was reported after 44 years old by 60% of pre-clinical and 53% of clinical students (p=0.046). Only 3% and 2% of students respectively known that the chance to conceive was 30-39% if a woman younger than 25 years old and young man had unprotected sex at the time of ovulation. Around 19% and 15% of students were aware that 70-79% of 25- to 30-year-old women became pregnant within a year if a couple had unprotected intercourse on a regular basis. 18% and 24% had accurate knowledge on infertility rates (p=0.016) and around 11% - on the chance of having a child with one attempt at IVF.

**Conclusion:** There is lack of knowledge in fertility/infertility among medical students with insignificant improvement after classes. Special emphasis should be placed on fertility/infertility issues in university curriculum of future health care providers in Ukraine.
O39. A web platform for tailored interventions on preconceptional health

Eleonora Agricola; Angelo D’Ambrosio; Alberto Tozzi

**Background:** Tailored intervention strategies are more effective in improving healthcare outcomes compared to the interventions that are not profiled on the target population. Based on these evidences and the increasing use of the web by women to find information on reproduction and pregnancy, we developed “MammaInForma”, a web platform dedicated to Italian women planning a pregnancy.

**Aim:** To reduce the risk factors for adverse pregnancy outcomes, we conducted a web tailored intervention profiled on the MammaInForma users’ health status and lifestyles. To improve awareness and address misconception, we prioritize tailored communication identifying the actual information needs on preconception health through a web-based surveillance of web searches, publication and social media activities.

**Methods:** Through an online questionnaire, we collected data on woman’s health status and lifestyles. An algorithm automatically used that information to generate a tailored document illustrating the recommendations on the strategies to change behaviour and on medical interventions. The participant periodically received profiled SMS reminding the recommendations. To identify the information needs, we set up a semiautomatic web-based system for monitoring Google searches, web pages and activity on social networks on the relevant preconception topics. We then published web newsletters considering the identified contents.

**Results:** Since September 2011, more than 1000 women participated to the web intervention. At the follow up we measured an increase of more than 20% in folic acid assumption and almost 50% reduction in the prevalence of alcohol consumption. In the last year, almost 100 women also activated the SMS service. Twenty-five percent of the text messages sent regarded the management of chronic diseases. Between March 2014 and July 2015, we registered more than 500 visits at the newsletters link and almost 300 downloads.

**Conclusion:** MammaInForma represents an effective resource to implement tailor interventions and improve general preconception health in women planning a pregnancy.
O40. Why women do not ask for information on preconception health? Focus groups with women of childbearing age and healthcare professionals

Renata Bortolus, Nadia Oprandi, Francesca Rech Morassutti, Luca Marchetto, Francesca Filippini, Eleonora Agricola, Alberto E. Tozzi, Carlo Castellani, Faustina Lalatta, Bruno Rusticali, Pierpaolo Mastroiacovo

Background: Preconception care involves health promotion to reduce risk factors that might affect women and couples of childbearing age. The risk factors of adverse pregnancy outcomes include previous congenital diseases, miscarriage, prematurity, fetal growth restriction, infertility, maternal chronic diseases, lifestyle. Effective preconception care involves a range of preventive, therapeutic and behavioural interventions. Although in Italy there are national preconception care recommendations concerning the general population, they are usually encouraged informally and for a single risk factor.

Aim: Investigate attitudes and behaviours of women of childbearing age and healthcare professionals regarding preconception care interventions.

Methods: We conducted a qualitative study among women of childbearing age and healthcare professionals between February 2014 and February 2015. Five focus groups were held: 2 with non-pregnant women aged 22 to 44 years and 3 with healthcare professionals. Discussion topics included: women’s questions about preconception health, worries and barriers regarding preconception care interventions, attitudes and behaviours of women and healthcare professionals towards preconception counselling, women’s information sources. In the analysis of the focus groups priority was given to what was said by the women, supplemented by information from the health care professionals.

Results: Fourteen women of childbearing age (8 nulliparae and 6 multiparae) and 12 health care professionals (3 nurses, 4 midwives, 5 doctors) participated in the focus groups. The results indicate a lack of awareness of preconception health and the presence of many barriers to preconception counselling relating women, healthcare professionals and policy. Women’s knowledge and attitudes towards primary preconception counselling information are described. The main reference source of information in this field for Italian women seems to be the gynaecologist.

Conclusion: The study indicates a lack of awareness of preconception health among Italian women of childbearing age and healthcare professionals. The findings might contribute to strategies for the implementation of preconception care guidelines.
O41. Current practice of preconception care by primary caregivers in the Netherlands

L.C. de Jong-Potjer, S.F. van Voorst, S. Plasschaert, , E.A.P. Steegers, S. Denktaş

Background: Over the past decade the value of PCC (Preconception care) consultations have been acknowledged. Investments have been made to promote delivery and uptake of PCC consultations in the Dutch primary care setting.

Aim: This study aims to assess current activities, perceptions, and prerequisites for delivery of PCC amongst general practitioners (GP's) and midwives in the Netherlands.

Methods: Cross-sectional survey amongst 449 GP’s and 250 midwives.

Results: 449 GP’s and 250 midwives filled in the questionnaire. While GP’s and midwives, are frequently confronted with questions about preconception risks, patients’ explicit request for a PCC consultation lags behind. Caregivers point out preconception risk factors, nonetheless only a minority recommends an actual PCC consultation. Actual PCC consultations occur infrequently (Table 1). Risk factor screening, and the use of risk assessment tools varies between GP’s and midwives. Respondents’ perceptions about PCC consultations were generally positive. More training, staff, promotion of PCC and adequate reimbursement are prerequisites for future delivery. GP’s differ in their opinion whether or not GP’s or midwives are primarily responsible for PCC consultation. Midwives see themselves as the responsible providers for PCC consultations.

Conclusion: GP’s and midwives contribute to patient’s awareness of preconception risks; however the step to an actual PCC consultation lags behind. A minority of the potential population is being offered to a standardized individual PCC consultation within the primary care setting. This study identifies prerequisites, barriers and other potential targets to enlarge the scale of individual standardized PCC.
O42. Effectiveness of recruitment strategies and preconception health services - The Healthy Pregnancy 4 All study


**Background:** In the Netherlands delivery of preconception care to couples in the general population has been acknowledged as a tool to reduce perinatal mortality and morbidity. In the Healthy Pregnancy 4 All (HP4All) program primary caregivers delivered preconception care consultations whilst a recruitment strategy was employed to promote uptake of the service by prospective parents.

**Aim:** To describe the effectiveness of the recruitment strategy and consequent PCC consultations.

**Methods:** The HP4All study is a population-based prospective cohort study conducted between 2011 – 2014. 110,199 invitational letters were sent to women registered in municipal administrative records, 31,088 invitational letters were sent by participating general practitioners, youth health care centers referred to the health care service and peer health education was delivered to 1796 women. Women that applied for the preconception care consultations were registered and asked to participate in the effectiveness study. They were asked to participate in pre- and post-comparison of preconception health by means of questionnaires and laboratory tests. Power calculation (based on folic acid supplementation and smoking cessation) provides a study size of n=839 women.

**Results:** The recruitment strategy resulted in 587 applications for preconception care consultations. The passive invitational approaches (the invitational letters) contributed to most of the applications for preconception care (n=424). Active invitational approaches (youth health care referral and peer health education) resulted in few applications (n=7). As n=267 women participated in the effectiveness study, the cohort was underpowered. Implementation of the approach varied.

**Conclusion:** Effectiveness of the recruitment strategy was insufficient to evaluate effectiveness of preconception care consultations. However, this study does show that general recruitment approaches are feasible and do promote uptake at a small scale. Effectiveness of PCC cannot be established until effective recruitment strategies are developed and implemented sufficiently.
O51. Closing the Gap in Fertility Health Awareness: Evaluation of the Fertility Status Awareness Tool (FertiSTAT) Among Service Users and Providers

Fulford B, Bunting L, Boivin J

**Background:** There are many factors that affect female fertility that may impact on a woman’s chance of achieving her desired parenting goals. A number of these risk factors are modifiable or can be overcome and thus their impact on fertility can be reduced or prevented if relevant information and guidance is provided to women. The Fertility Status Awareness Tool (FertiSTAT) is a self-administered tool that takes women through a series of questions about their lifestyle and reproductive profile and generates personalised fertility guidance based on their risk profile.

**Aim:** The present study evaluated the feasibility and acceptability of the FertiSTAT with target users and service providers.

**Methods:** The final sample of 24 participants comprised of 14 women of reproductive age (range: 27-43 years of age), seven GPs (1 man and 6 women) and three reproductive healthcare professionals (3 women). An in-depth qualitative think-aloud protocol and a semi-structured interview were used. The think-aloud task involved participants verbalising their thoughts and feelings towards the FertiSTAT while using it. The semi-structured interviews covered six topic areas (e.g., practicality, reactivity). The think-aloud protocol and semi-structured interviews were audiotaped for transcription by an independent transcriber and data submitted to thematic analysis.

**Results:** The main themes were: captures attention (e.g., busy but draws me in); cognitive and emotional reactions elicited by using the tool (e.g., empowering, perceptions of credibility, knowing causes scary feeling, norms as decision aids); trade-offs of using the tool (e.g., facilitates the doctor-patient relationship, patient knowing but not doing change) and; application and dissemination (e.g., motivates action, Methods: of dissemination).

**Conclusion:** The FertiSTAT was seen as having a place in medical and public health practice as well as being a self-assessment tool for women to complete throughout reproductive years to keep track of effects on their fertility.
O52. Being in a maze - Infertile men’s expectations and desires in relation to fertility treatment before their first treatment


**Background:** Infertility concerns both partners in the couple. Male infertility is a potential severe stressor. The infertile men want a dialogue concerning fertility treatment, male infertility, the role of the male partner, and information about the psychological consequences of male infertility.

**Aim:** To explore infertile men’s expectations to and desires in relation to fertility treatment with intracytoplasmic sperm injection (ICSI), and explore how male infertility is experienced.

**Methods:** Semi-structured qualitative interview study with 10 men with low sperm quality undergoing fertility treatment at the Fertility Clinic, Copenhagen University Hospital Hvidovre, Denmark. Participants were interviewed before their first ICSI-treatment attempt. The data collection took place between November 2014 and May 2015. Data were analysed using qualitative content analysis following Graneheim and Lundman.

**Results:** The time before the treatment starts feels like being in a maze and the most annoying frustration is the waiting time. The participants want detailed information about the treatment plan, the results and the progress. The men’s masculinity is threatened, because they feel they cannot do what a man is supposed to do, but they push it aside and focus on the women. The men don’t wish only to be on the sidebar, and they want the staff to address the psychological aspects for both.

**Conclusion:** These results are in agreement with other studies concerning that the men wants the clinical staff’s support and a dialog concerning male infertility. We suggest that the staff focus more on the psychological burden of infertility for both. Furthermore that the clinics work towards more structured information from the time of the referral to make the way out of the maze manageable.
O53. Association between male and female alcohol consumption and live birth after assisted reproductive technology (ART) treatment

Madsen I I, Petersen GL I, Kamper-Jørgensen M I, Pinborg A 2, Schmidt L I

1. Department of Public Health, University of Copenhagen, Copenhagen, Denmark 2. The Fertility Clinic, Copenhagen University Hospital Hvidovre, Copenhagen, Denmark

Background: As fertility patients can be motivated to lifestyle interventions before initiating treatment, it is relevant to identify preventable factors affecting the rate of treatment success. Preconceptional alcohol consumption has been shown to affect egg and sperm quality, but results from the few existing studies examining the association between alcohol consumption and live birth after fertility treatment are inconsistent.

Aim: To investigate to which degree preconceptional independent and combined female and male alcohol consumption influences the probability of achieving a live birth after ART treatment.

Methods: National register-based study including all Danish women undergoing at least one ART treatment cycle from January 1, 2006 to September 30, 2010. Information on alcohol consumption was extracted from the in vitro fertilization (IVF) registry and linked to registries containing information on all births and abortions.

Results: In total, 12,981 women and their partners went through 29,834 treatment cycles. Overall, results did not reach statistical significance, but interesting tendencies were seen. For men, a dose-dependent reduction of odds of partner achieving a live birth was seen (OR for trend 0.99; 95% CI 0.97–1.01). Female alcohol consumption did not affect odds of achieving a live birth (OR for trend 1.00; 95% CI 0.99–1.01). Results on couples were inconclusive.

Conclusion: Our results suggest that preconceptional male alcohol consumption has a detrimental dose-dependent effect on the ability to achieve a live birth after ART. It is reasonable to believe that this result is relevant also for couples trying to conceive without the use of ART. If results are replicated, more focus on both partners’ alcohol consumption is needed in the preconceptional care of couples.
O55. Cervical cancer prevention in Sweden from a reproductive health perspective

Bengt Andrae, Miriam Elfström, Pär Sparén. Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden.

HPV testing as a primary cervical cancer screening method is now recommended. Corresponding National guidelines for the screening organization, management and monitoring are being issued in spring 2016, and the work behind developing these guidelines will be presented at the conference. Cervical cancer is still the most common malignancy in women under the age of 40. Invasive cancer detected by symptoms can often be cured in young women but almost inevitably means loss of fertility in addition to psycho-sexual problems. One focus of cervical cancer prevention is therefore to retain reproductive health in addition to maximizing chances of cure. Persistent human papillomavirus (HPV) infection is a necessary cause of cervical cancer. Vaccines against the most important types of HPV are highly effective but need to be given before exposure to the virus. School based vaccination of young girls has been implemented, but screening will remain important as the current vaccines do not offer complete protection and girls vaccinated at older ages may have been previously exposed. Screening in young women is a matter of delicate balance between benefits and harms. Invasive cervical cancer is extremely rare before age 23 and all screening is discouraged before that. Aggressive treatment of detected precursors may result in premature delivery, but the major benefit of screening young women is the detection of micro-invasive cancers that can be cured without compromising reproductive health. HPV testing is not yet suitable for primary screening in young women since transient HPV infections are very common up to age 30. Until vaccinated cohorts approach that age, cytology remains the screening method, and the complexity of integrating screening and vaccination warrants systematic monitoring.
O56. What About the Men? The importance of men and their parenthood readiness in women’s childbearing decisions and parenthood planning

Emily Koert & Dr. Judith Daniluk at University of British Columbia, Vancouver, Canada

Background: Research suggests that men influence heterosexual couples’ family planning decisions, in particular around the timing and delay of parenthood. But with primary focus on women’s needs and experience in parenthood planning and pre-conception care, less is known about the specific ways in which men play a role.

Aim: Relevant findings from three recent studies will be presented to highlight the role of men and their parenthood readiness in women’s childbearing decisions. Implications for pre-conception care for both sexes will be outlined.

Methods: Two online surveys (Study 1: 599 men age 20 to 50; Study 2: 500 women age 18 to 38) and qualitative interviews with 15 women (age 40 to 65) who identified as delaying childbearing were conducted.

Results: The men lacked important information about the consequences of delayed childbearing and the effect of paternal age on pregnancy and infant outcomes and were unrealistically confident about the ability of ART treatments to compensate for age-related fertility decline, suggesting that they were basing their family-planning decisions on inaccurate information. The women cited the importance of being in a stable relationship with a willing partner who was prepared to contribute to parenting as the most important factor in their fertility decision-making. The women reported that they did not want to be, or end up a single parent, and thus were willing to delay childbearing until they found a “willing” partner – or until he felt “ready” – which for some meant eventually forgoing motherhood when these conditions were not realized by the end of their fertile years.

Conclusion: In designing pre-conception care and health promotion interventions, men should not or must not be forgotten – their intentions, knowledge, and beliefs, along with that of their female partners, must be taken into account to help both sexes achieve their fertility planning and family-building goals.
POSTER PRESENTATIONS
P4. Social, Cultural and Economic Environment and the Woman’s Ability to Achieve Her Reproductive Intentions- a Kenyan Context

Margaret Waitherero Mburu

*Background:* Unintended births is one of Family Planning Indicators. Unintended pregnancies may occur when women and their partners either do not want (additional) children or want to delay the next birth. This indicator is based on responses to the question, "At the time you became pregnant, did you want to become pregnant then, did you want to wait until later, or did you not want to have any/any more children at all?" It is measured as the percent of women of childbearing age reporting their most recent or current pregnancy was wanted then, wanted later, or not wanted at all.

*Aim:* The PMA2020 survey collects annual data at the national (urban and rural) and regional levels to allow for the estimation of key indicators to monitor progress in family planning.

*Methods:* For the first round of data collection (PMA2014/Kenya), survey resources allowed targeting a sample size of 120 EAs to be selected from the Kenya National Bureau of Statistics’ master sampling frame. All households, health service delivery points and key landmarks in each Enumeration Area were listed and mapped to create a sampling frame. PMA2020 uses standardized questionnaires for households and Service Delivery Points to gather data.

*Results:* Among all women with at least one birth, (51.9%) report that their last or current pregnancy was wanted then; another 31.8% wanted their pregnancy to be later; and (16.3%) did not want any additional children. The pregnancies were either mistimed or unwanted.

*Conclusions:* International Centre for Reproductive Health-Kenya is proposing a study to find out the level of awareness in the woman’s ability on developing a plan for their reproductive lives required to promote a healthy pregnancy before they get pregnant and the role played by social, cultural and economic environments in the woman’s ability to make these decisions.
P7. The role of Rotary in strengthening preconception and interconception care

Jan Lucas Ket, MD

Rotary, the greatest worldwide humanitarian service organization, consists of 1.2 million leaders and professionals who voluntarily share their personal and vocational reference, knowledge and networks to provide chances to other people lacking the opportunities they got. Rotary is organized in 34,000 Rotary clubs, each with a varied membership of adult characters and vocations, and without limitations on the basis of gender, race, color, creed, national origin or sexual orientation. Rotarians collaborate in fellowship over boundaries. Rotary has a Foundation focusing on peace and conflict prevention or resolution, disease prevention and treatment, water and sanitation, maternal and child health, basic education and literacy, economic and community development. Rotary started the successful Polio Eradication Initiative in the eighties of last century. Recently the Rotarian Action Group for Healthy Pregnancies, Healthy Children was established to stimulate and support Rotarians and their clubs with projects in the field of disease prevention and maternal and child health, including especially strengthening preconception care. Not only by funding but for all through offering their organizational skills and professional networks (head, heart, hands) Rotarians can also create awareness and enhance preventive initiatives on local, regional national and international level. Some Rotary projects and plans will be shown and eventually discussed.
P9. The impact of periconceptional maternal conditions and congenital heart defects on fetal cortical development

I.V. Koning, A. Graafeiland, I.A.L. Groenenberg, R.P.M. Steegers-Theunissen

**Background:** Cortical development, including gyration, is essential for neurodevelopmental functional outcome. As the prenatal gyration process is strongly correlated to gestational age (GA), this may be a reliable marker for cortical development. Previous studies have shown that prenatal measuring brain fissures is feasible.

**Aim:** To investigate the impact of periconceptional maternal conditions and congenital heart defects (CHD) in offspring on human cortical development measured by fetal brain fissures using three-dimensional ultrasound (3D-US).

**Methods:** Embedded in the Rotterdam Periconceptional cohort study, singleton pregnancies were enrolled. Participants received 3D-US examinations at 22, 26 and 32 weeks gestational age. The Sylvian fissure, insula and parieto-occipital fissure (POF) were measured in standardized planes. Linear mixed models were performed to analyse associations between periconceptional maternal conditions and longitudinal brain fissure measurements in fetuses with CHD and controls.

**Results:** In total 40 3D-US of 18 fetuses with CHD and 107 3D-US of 54 healthy controls were included in this study. In CHD compared to controls, the left insular depth was significantly smaller (β=-3.667, 95%CI= -6.597;-0.738, p=0.02), while its growth rate was slightly higher (β=0.017, 95%CI= 0.002;0.032, p=0.03). The left insula depth is significantly smaller in male fetuses (β=-2.576, 95%CI= -5.000;-0.151, p=0.04), while its growth rate is slightly higher in female fetuses (β=0.017, 95%CI= 0.005;0.030; p=0.01). Furthermore, we found positive associations between nulliparity, primigravidity and the Sylvian fissures (Left: p<0.01, p=0.19 and Right: p<0.01, <0.05 respectively) as well as maternal BMI and the measurements of the left insula (p<0.05).

**Conclusions:** Longitudinal measurements of the major cerebral fissures show differences in cortical development between fetuses with CHD and controls. Moreover, periconceptional maternal conditions including primigravidity, nulliparity and maternal BMI are associated with prenatal cortical development. The clinical implications of these findings for postnatal functional neurodevelopment have to be further investigated.
**P11. Feasibility study of a smartphone application for the preconception care of women with type 1 or 2 diabetes mellitus: a mixed methods study**

Chidiebere Nwolise, Dr Nicola Carey, Professor Jill Shawe

**Background:** Unplanned pregnancy is a public health concern especially in women with diabetes mellitus (DM) who are at increased risk of complications and adverse obstetric outcomes. Preconception care (PCC) is vital for reduction of these risks. Despite recommendations of preconception care for women with DM, evidence suggests that one-third of pregnancies are still unplanned. Women also lack sufficient knowledge and awareness of preconception care, and less than 50% access preconception care services. Current preconception care practice has failed to engage women in preconception care. Alternative strategies such as use of mobile application (App) have been proposed. There are few studies and little is known about the use of mobile Apps in preconception care of women with DM.

**Aim:** The primary purpose is to develop and test the feasibility of a preconception care mobile App (PCC-MA) for women with pre-gestational (type 1 and 2) DM.

**Methods:** A mixed methods research design which supports multiple data collection methods (focus groups, questionnaires and semi-structured interviews) will be used to address the current topic, provide preliminary outcome estimates and explore patients’ perspectives and experience. 6 healthcare professionals and 6 women with DM will be involved in focus group discussions to inform the app content. 20 Women with DM will use the app for 3 months. Hibbard’s patient activation measure will be used as the theoretical basis for the study.

**Results:** Quantitative data will be analysed using SPSS and qualitative data through thematic analysis using NVivo 10.

**Conclusion:** This study aims to improve knowledge regarding the role of alternative strategies, such as mobile Apps for preconception care in women with diabetes, and provide insight into their use for promoting preconception care awareness, patient activation and behaviour change. It is anticipated that it will also facilitate the reduction in morbidity and mortality associated with unplanned pregnancies.
Background: Maternal health care in the Netherlands is currently revised with a view to further reduce neonatal mortality. A comprehensive integrated maternity care system will be introduced in the near future. To maximize risk reduction, preventive measures to reduce neonatal mortality and morbidity should also be taken prior to pregnancy. Despite several initiatives, individual preconception consultations are still relatively unknown and infrequently used. By involving other health care professionals such as health visitors, medical specialists, dentists and dieticians next to midwives, general practitioners and obstetricians, the uptake can increase. To ensure uniform policy and optimal transfer patterns a multidisciplinary nationwide collaborative preconception guideline is needed.

Aim: To develop a multidisciplinary Preconception Indication List (PIL)

Methods: We conducted focus group discussions and distributed a survey questionnaire among stakeholders to identify the most important issues the PIL should deal with. A project team was formed consisting of representatives from all relevant disciplinary professional associations. This project team guided the project staff, determined priorities and critically discussed draft texts and policy proposals. Existing guidelines were used to formulate initial PIL chapters. At the request of the project team individual experts were consulted for specific input and essential literature. Once the project team has consensus on the draft PIL formulation, a nation-wide consultation will be held to allow relevant stakeholder organizations to comment on the draft document.

Results: A multidisciplinary preconception guideline (PIL), with clear indications for individual preconception care and the description of different professional roles. The PIL will enable and promote the preconception section of the envisioned integrated maternal health care system in the Netherlands.

Conclusion: Preconception care remains in its infancy in the Netherlands. The PIL will lead the way to optimal collaboration between relevant health care professionals and renew efforts to encourage couples of reproductive age to seek timely advice.

Affiliations: Suze Jans RM, MSc. PhD Researcher Royal Dutch Organisation of Midwives (KNOV) Utrecht The Netherlands Lieke de Jong-Potjer MD, PhD General Practitioner Zoetermeer The Netherlands Lex M. Bouter PhD Professor of Methodology and Integrity Faculty of Humanities Dept. of Philosophy VU University Amsterdam The Netherlands
P21. Barriers and facilitators for the use of preconception care

Poels, M., Koster, M.P.H., van Stel H.F.

**Background:** Preconception care (PCC) has the potential to optimize pregnancy outcomes. However, awareness of PCC amongst the target population is generally limited and the use of PCC remains low between 27-39%.

**Aim:** The objective of this study was to identify parental motives for (not) using PCC.

**Methods:** Recruitment of participants took place among couples who received antenatal care at a Dutch community midwifery practice. In June and September 2014, five focus groups were held with 29 women and one focus group with 5 men. The focus groups were audio-taped, transcribed verbatim and analyzed using NVivo 10 software.

**Results:** Participants considered PCC appropriate in case of fertility, health or lifestyle problems. Perceived sufficient knowledge was identified as a barrier for PCC use, as well as not fully planning pregnancy, lack of awareness of PCC and practical constraints. Participants indicated a wish for secrecy regarding their pregnancy plans, which could be interfered by PCC. Moreover, it was expressed that PCC could induce stress and could hinder the natural process of conception. On the other hand, a good preparation, optimizing pregnancy outcomes, a healthy pregnancy, baby and mother were considered intrinsic motivators for the use of PCC. Although participants frequently used other information sources to inform themselves on preconception health, they appreciated the prospect of personal contact, dialogue, reassurance and reliable information that could be offered by PCC.

**Conclusion:** Despite an intrinsic motivation to optimize pregnancy outcomes, parents perceive more barriers than facilitators to make use of PCC. PCC is considered appropriate in case of fertility, health or lifestyle problems.
P22. Providers’ views on the delivery of PCC

Poels, M., Koster, M.P.H., van Stel H.F.

Background: The attention for Preconception Care (PCC) has grown substantially in recent years, yet the incorporation of PCC in daily practice is far from routine. One of the major challenges is identifying how PCC can best be delivered in order to improve its implementation and uptake.

Aim: The aim of this study was to assess the views of healthcare providers on the delivery of PCC.

Methods: Participants were invited for a conference on the local implementation of PCC. Five parallel group sessions were held with 30 health professionals from different disciplines; gynecology and obstetrics, midwifery, maternity care, general practice, health care, physiotherapy and dietetics. The sessions were moderated using the Nominal Group Technique, in which bottlenecks (step 1) and solutions (step 2) for the delivery of PCC were gathered, categorized and prioritized by the participants.

Results: Participants expressed there is no clear responsibility for PCC amongst healthcare providers, due to lack of awareness, the absence of a financing structure and limited facilities. The following recommendations for the delivery of PCC were made: creating a financing structure for PCC within the health insurance system, improving the cooperation between local healthcare providers by means of allocating responsibilities and a clear referral system, expanding knowledge and educational facilities and investing in IT solutions. Moreover, it was suggested to launch a promotional campaign to reach the target group and to offer PCC opportunistically by routinely discussing the subject during every health encounter.

Conclusion: From the provider’s perspective it is recommended to enhance the delivery of PCC by focusing on the following themes: financing, local cooperation between health providers, implementation strategies, investing in facilities and education and reaching the target group.
P23. Fertility awareness for family building

Bola Grace

Introduction: Global health policies have highlighted the importance of optimising women’s health and knowledge for contraception as part of pregnancy prevention and for pregnancy planning as part of preconception care. However, in terms of general fertility awareness, there is a disproportionate amount of information on pregnancy prevention compared to pregnancy planning. This study therefore aims to help fill the knowledge gaps in fertility and conception with respect to knowledge, attitudes, practices and behaviours regarding pregnancy planning and family-building.

Research questions
• What are the current patterns of fertility knowledge, attitudes, practices and behaviours of adolescents, women of reproductive age, men of reproductive age and healthcare professionals?
• What are the most promising approaches for improving fertility knowledge and awareness which can enable men and women achieve their desired fertility intentions?

Research methods and study population Qualitative and quantitative mixed research methodologies will be used to explore fertility knowledge and awareness. Three distinct population groups across the reproductive age-span will be investigated:
• Women and men of childbearing age
• Healthcare professionals
• Secondary school age adolescents

What is known already and what this study will add Literature review has highlighted significant knowledge gaps in fertility awareness worldwide. However, most studies on this topic have been carried out within university settings, mainly on women and outside the UK. This study will address some of these limitations through the inclusion of women and men across diverse socioeconomic demographic in the UK. In addition to further understanding current level of fertility awareness, the study will explore possible explanations for poor fertility education and identify opportunities for improvement. Ultimately, it is hoped that the insight gained from this research will be used to improve fertility awareness by generating better and more effective means of providing quality fertility information which can help men and women achieve their desired fertility intentions.
P24. Measuring pregnancy planning: A psychometric evaluation of two scales

Jennifer Drevin, Tanja Tydén, Per Kristiansson, Maria Ekstrand, Hanne K. Hegaard, Margareta Larsson, Jenny Stern & Andreas Rosenblad

Background: The incidence of unplanned pregnancies is an important measure of reproductive health, but there is no standard method for measuring this. London Measurement of Unplanned Pregnancies (LMUP) is a comprehensive six-item instrument taking contraceptive use, timing, intention, desire, partner agreement, and pre-conceptual preparations into account, but is cumbersome to use in routine antenatal care. To remedy this, we suggest the Swedish Pregnancy Planning Scale (SPPS), an easy-to-use single-item measure utilizing a five-grade Likert scale measuring the woman’s own view of planning degree, suited for both research and routine antenatal care.

Aim: To evaluate and compare the psychometric properties of LMUP and SPPS.

Methods: During the years 2012-2013, midwives invited 5494 Swedish women in early pregnancy to answer a questionnaire about pregnancy and reproductive health, of which 3327 accepted participation and answered the LMUP and SPPS questions. Data were analysed using Confirmatory Factor Analysis, including Chisquare tests and goodness-of-fit indices, as well as Cohen’s Weighted Kappa (κw).

Results: LMUP scores from the collected data were found to fit the hypothesized factor structure well, with all LMUP items contributing to measuring pregnancy planning (p<0.001). Despite this, the general item reliability was low, with only two of the six items, intention and partner agreement, having acceptable item reliability. The results of LMUP and SPPS corresponded well to each other (κw= 0.63), with 70%/75% planned pregnancies according to LMUP/SPPS, 29%/17% ambivalent, and 1%/8% unplanned.

Conclusions: LMUP suffers from low item reliability, which together with its lengthiness makes it less suited for use in routine antenatal care. The good agreement between LMUP and the more easy-to-use SPPS scale suggests that SPPS may be used as a complement to or a replacement for LMUP.
P25. The PrePreg Network – a European research network within Preconception Health and Care

Maria Ekstrand, Uppsala university; Jenny Stern, Uppsala university; Hanne Hegaard, Rigshospitalet Copenhagen; Jill Shawe, University of Surrey; Ilse Delbaere, VIVES University College; Pierpaolo Mastroiacovo, International Clearinghouse for Birth Defects; Tanja Tydén, Uppsala University

In Europe, preconception care is emerging as a developing field of research. The need for a European research collaboration network was elucidated after the first Preconception Health and Care Congress in Brussels 2010. Shortly after, the PrePreg Network was founded. The network brings together researchers and clinicians who have developed a programme of research to enable better understanding of the bio-psychosocial, cultural and economic factors affecting preconception health and care across Europe. The main aim of The PrePreg Network is to increase health promoting behavior in relation to pregnancy planning. The growing network currently holds about 30 members (researchers and clinicians) from countries in Europe and the USA. Since the start in 2010, the PrePreg Network has met annually in London, Copenhagen, Rome – and now Uppsala. A few research projects have been published within the PerPreg Network and several are under way. The first PrePreg collaboration that was initiated reviewed existing preconception care guidelines in six European countries (Shawe et al 2014). Other collaborations undertaken within the PrePreg Network are the development of a questionnaire with a validated instrument measuring pregnancy planning (Backhausen et al., 2014) and the Evaluation of a preconception consultation instrument called “Reproductive Life Plan” (Stern et al., 2013). The 3rd European Congress on Preconception Health and Care is arranged by The PrePreg network in collaboration with Uppsala university.
P29. Identification of previously undetected genetic risk factors in a sample of 1500 women referred for first trimester prenatal screening/diagnosis

Lalatta F. Gavazzi E. Bianchi V. Gentilin B, Cesaretti C., Bedeschi F. Fogliani R. Fedele L Natacci F. Fondazione IRCCS Cà Granda Ospedale Maggiore Policlinico Milano,Italy

Background: Family history represents an important tool to detect genetic risks. Italian Health System does not give sufficient attention to family histories of women who intend to conceive or are in the first few weeks of pregnancy. This is due to lack of organization, limited time (average required to collect a family history is 20 minutes) and insufficient understanding of the impact on fetal risk of shared genetic abnormalities in the family.

Aim: To set up a convenient instrument to assist women and couples to report congenital defects among their relatives and identify cases that are candidates for a genetic counselling in which according to the increased risk they are given a new more precise definition of their reproductive options and made aware of tools that are available for fetal surveillance.

Methods: a 17 item questionnaire has been submitted within one year to 1500 pregnant women before or in the 8th week. All women were referred to our Institution for first trimester prenatal testing. After a brief familiarization with the instrument (10 minutes) women completed the questionnaire just before the collective counselling session about prenatal procedures. Groups consisted of 25-35 women each time. Responses were checked by a trained person and all positive answers were registered. All women with a positive family history and their partners were then invited to a clinical genetics session before making any decisions about prenatal screening and/or prenatal diagnosis.

Results and conclusions: 127 (8.5%) of pregnant women gave at least one positive response and stated that those questions had never been asked before despite their having a first obstetrical visit. Among those who scored positive 22 women (1.8%) had their reproductive risk modified by this intervention and were then given the option to make decisions about specific additional prenatal tests. A self-administered questionnaire can improve the identification of undetected reproductive risk even during first trimester of pregnancy.
P30. Parent’s attitudes towards Preconception Genetic Carrier Screening

Maria Ekstrand, Tanja Tydén, Jenny Stern, Maja Bodin, Jennifer Drevin, Andreas Rosenblad, Ulrik Kihlbom, Margareta Larsson

Background: Genetic technologies advance rapidly. It is possible to undergo genetic carrier screening before pregnancy, to examine genetic risks to future offspring.

Aim: This study aimed to investigate parent’s attitudes towards preconception genetic carrier screening (PGCS), and factors associated with an interest in PGCS.

Methods: Cross sectional design. A sample of 1257 women and 817 partners, recruited via antenatal clinics in Sweden, responded to a questionnaire containing questions about PGCS, 12 months post partum. The study is part of the longitudinal Swedish Pregnancy Planning (SWEPP) study.

Preliminary results: One third of the parents were positive, 28% were negative and 43% were uncertain whether they would consider a genetic test before a future pregnancy. More men than women were positive towards PGCS (33 % vs 28 %, p=0.007) and fewer men were concerned about negative consequences if PGCS were to be offered to prospective parents (46% vs 50 %, p<0.001). Motives for PGCS were; “not wanting the (future) child to suffer” (45%), “exclude the risk of having a child with a severe genetic disorder” (44%), “an act of responsibility” (23%) and “obliged by others” (1%). Motives against PGCS were “opposed to such way of child selection” (28%) and “not wanting such information” (22%). More men considered PGCS an act of responsibility (27% vs 21%, p=0.003), whereas more women ticked avoiding the (future) child to suffer (49% vs 40% p<0.001).

Conclusion: This is the first survey exploring attitudes towards PGCS in Sweden. Women and men seem to have mixed attitudes and relatively high uncertainty towards such screening. The future extent of the clinical utility of PGCS is currently unknown, but patients’ interest and demand is one important aspect to consider.
P32. How women perceive abortion care: A study focusing on healthy women and those with mental and posttraumatic stress

Inger Wallin Lundell, Susanne Georgsson, Inger Sundström Poromaa, Ulf Högberg, Gunilla Sydsjö, Agneta Skoog Svanberg

Background: Women generally rate their overall satisfaction with abortion care as high. However, when women are dissatisfied it is often related to multiple factors including patient-related aspects such as pain experiences, expectations of care and sociodemographics. How mental stress among women requesting induced abortion affects their perception of abortion care is insufficiently explored.

Aim: To identify perceived deficiencies in quality of abortion care among healthy women and those with mental stress.

Methods: This was a multi-centre cohort study including six obstetrics and gynaecology departments in Sweden. Questionnaires with validated instruments were used for self-assessment of posttraumatic stress (PTSD) and posttraumatic symptoms (PTSS), symptoms of anxiety and depression as well as evaluation of abortion care. Pain during medical abortion was assessed in a subsample using a visual analogue scale.

Results: Overall, 16% of the 708 participants assessed the abortion care as being deficient, and 22% in the subsample (n=128) experienced intense pain during medical abortion. Childless, primigravid, and young women were more likely to assess the overall experience of abortion care as deficient, as well as women with PTSD/PTSS. The latter group differed from healthy women in reports of deficiencies in support, respectful treatment, opportunities for privacy and rest, and possibilities for support from a significant person during the procedure. There was a marginally significant difference (p= 0.053) between women with PTSD/PTSS and the healthy group regarding insufficient alleviation of pain.

Conclusion: Childless, primigravid, and young women assessed the overall abortion care as deficient to a higher extent than other participants. Compared to healthy women, women with PTSD/PTSS perceived abortion care to be deficient. These findings indicate that in order to improve abortion care, these women require extra support and basic assistance in the alleviation of pain, encouraging support from specific persons and finally privacy during the abortion procedure.
P43. Maternal preconception risk factors: update on a survey in Northern Italy

Rech Morassutti F, Marchetto L, Filippini F, Rigotti E, Cesari E, Trevisanuto D, Bortolus R

**Background:** An appropriate preconception maternal health status should be achieved in order to reduce the risk of adverse pregnancy outcomes and complications. Despite the increasing interest in this field, preconception risk factors—such as attitudes and behaviours of future mothers—are still poorly investigated in Italy.

**Aim:** To assess the prevalence of maternal preconception risk factors in Northern Italy.

**Methods:** As a result of several focus groups conducted with both women and health care professionals (HCPs), we developed a structured survey. We administered the survey on puerperae women in the first days after the delivery. Preterm birth and non-healthy baby were considered as exclusion criteria. The study, started in February 1, 2014, is ongoing, and is conducted in 4 Northern Italy’s hospitals (Verona, Padova, Legnago, Gallarate).

**Results:** Over 400 questionnaires were administered to the present date. Regarding the time of the conception, 71.6% of the women actively planned the pregnancy, while 3.9% were avoiding the pregnancy. Planning the pregnancy, 60.2% of the women didn’t confront any HCP, 33.9% had a gynaecologist consult and 4.3% turned to the general practitioner. 89.5% of the women regularly assumed folic acid, but 62% of them started to take it only after the notice of pregnancy. 16.9% of the women were smoking immediately before the conception: 69.4% of them quit smoking while 29.2% only reduced the daily cigarettes. Before getting pregnant obese women were 4.3%; overweight women were 13.3%. Genetic tests were offered to 13.7% of the women: the decision to take the test were held principally dealing with the partner (77.6%) or with HCPs (12.1%).

**Conclusion:** Despite projects on preconception health have been developed in the recent years, more attention has to be focused on this topic, since the mothers to be awareness is still poor.
P45. Evaluating the Influence of Bariatric Surgery on Young Females

Marie McCormack, Jane Ogden, Jill Shawe

**Background:** Bariatric surgery (BS) has been demonstrated to be an effective and viable treatment to sustain weight-loss for severe obesity, have a positive influence on adverse medical conditions and aid long-term health benefits including resolving menstrual irregularities leading to improved female fertility. The number of young-women (18-25 years) undergoing BS is increasing at an age which corresponds with female fertility peaking. Menstrual dysfunctions experienced by obese women may mean that contraceptives are not perceived as necessary. In comparison with the general population, obese women have limited contraceptive choices because of health-related issues and options decrease further, initially post-BS. As weight reduces and stabilises so contraceptive choices increase, but this does not necessarily reflect uptake and as such young-women who are undergoing BS are at risk of becoming pregnant sooner than planned.

**Aim:** To evaluate quality-of-life and health behaviours with relation to sexual reproductive health and contraception use with young females (18-25) years who are preparing for and/or who have undergone any form of Bariatric Surgery.

**Method:** A mixed-methods design with three studies: two quantitative studies: 1) a prospective-cohort (before/after surgery); 2) a cross-sectional post-surgery using an ‘on-line’ questionnaire and 3) a qualitative: semi-structured interview study. Recruitment: via an advertisement posted on the website of a national weight-loss charity (www.wlsinfo.co.uk), posters at the University-of-Surrey, and referrals from nominated BS centres. The qualitative sample drawn from volunteers who have completed the survey-questionnaire.

**Results:** Initial results will be presented. Analysis: quantitative data using SPSS and qualitative using an interpretative approach (IPA).

**Conclusion:** This is the first study to focus on and explore young women at their fertility peak undergoing BS, and the influences on quality-of-life and health behaviours in relation to sexual reproductive health and contraception use.
Recent studies demonstrated that high adherence to Mediterranean Diet in women in fertile age and during pregnancy can reduce significantly the risk of birth defects and prematurity. Unfortunately, there are not yet available data on adherence to the Mediterranean diet among Italian women in fertile age and during pregnancy. Furthermore Food Frequency Questionnaire (FFQ) for the evaluation of adherence to the Mediterranean diet and style habits are very long and time spending, not appropriate for this specific target population. In the frame of an Italian project funded by the Ministry of Health, a new, short semi-quantitative FFQ – AMDW- was developed to evaluate food group intakes, adherence to the Mediterranean diet and style habits among women in fertile age and during pregnancy, taking into account international and national recommendation documents for these specific target population. The new questionnaire was validate with a standard FFQ for the determination of adherence to the Mediterranean diet. The survey was carried out on 300 women of pregnancy and 100 women in fertile age. Correlation coefficients were calculated to assess the validation AMDW questionnaire and reasonable validity was observed. Emerging data show low adherence to the Mediterranean diet both in women in fertile age and during pregnancy, very low consumption of fruit and vegetables (73% of sample: about 2 portion per day), legumes (83% of sample: 1-2 portion per week), and high consumption of meat and meat products (85%; more than 1.5 portion per day). Different behaviours was observed for alcohol consumption and smoking between the two population groups. A relevant data is that 13% of pregnant women consumed 3 alcohol unit per week and 30% smoked. Results showed an adequate validity of the AMDW questionnaire for evaluating food group intake, adherence to Mediterranean diet and style habits women in fertile age and during pregnancy.
P47. Nutrition for women in fertile age: from theory to practice. The F-menu initiative in Italian workplace canteens.

Stefania Ruggeri, PhD, Nutritionist (Italy). Consiglio per la Ricerca in agricoltura e l’analisi dell’Economia Agraria (CREA-NUTRIZIONE).

Many studies confirmed that a diet rich of nutrients such as folate, omega 3 fatty acids, iodine and low levels of saturated fatty acid, sugars and calories is effective in improving fertility and reducing the risks of congenital malformations and prematurity. On the basis of scientific evidences, public institutions suggest women and men in fertile age to improve their diet with the consumption of food rich in these healthy nutrients but often there is not simple for people translate these nutritional recommendation into practice. In the frame of a project funded the Ministry of Health “OKkio alla ristorazione” (A look at workplace canteen) 10 F-menus were realised, menu properly designed for women in fertile age. The F-menus were realised through the collaboration between a nutritionist and an Italian chef Cristina Bowerman, awarded a Michelin star. F-menus were designed on five basis: 1) taking into account nutritional recommendation for fertile age, more recent literature and consensus documents; 2) Mediterranean diet (seasonability, sustainability); 3) food cost (for improving the distribution in workplace canteen); 4) best cooking techniques (to maintain nutritional properties of food); 5) taste and flavour. F-menus are all nutritional balanced, designed to cover specific nutritional needs of women in fertile age according the RDA’s and reproductive health recommendations. They are very rich in fruit and vegetables and wholegrain. F-menus are very rich in folate, omega 3, dietary fibre, iodine (by using iodine salt) low of saturated fatty acids and sugars. Carbohydrate, lipids and proteins in all the F-menus are balanced according the Mediterranean Diet standard. F-menus were distributed one weekly in more than 240 Italian workplace canteens that participate the project during 2015 (about 120,000 meals per day). F- menu initiative was successful among women; results and comments will be described. F- menu initiative is a practical example of applied nutrition: the recipes as a nutritional models for women in fertile age.
P48. Dialogue between Midwives and Parents-to-Be about Pre-Pregnancy Alcohol.

Hjördis Högberg, Petra Pålsson, Fredrik Spak, Margareta Larsson

**Background:** In Sweden women are recommended to minimize alcohol use or abstain from alcohol when planning a pregnancy. The male partner is also advised to decrease alcohol intake in case of daily drinking (or risk drinking) when planning a pregnancy because “alcohol has a direct harmful effect on cells where sperms are formed”. This information can be found on a publicly funded health-information web-site. The aim of this on-going study is to investigate the use of alcohol the year before pregnancy among parents-to-be.

**Methods:** Participants are recruited at four public antenatal care clinics in Skåne County in Sweden and so far we have data from 261 pregnant women and from 121 partners. At the health counseling in pregnancy week 6-7, the midwife has a dialogue about alcohol from a life-cycle perspective with the couple and also inquires about alcohol consumption during the year before pregnancy.

**Results:** Thirty-six percent of all pregnant women and partners stated that they had reduced alcohol consumption before pregnancy, but 49% of pregnant women and 53% of partners did not change alcohol consumption during the year before pregnancy. These results were compared with findings from a study performed 11 years ago among 484 pregnant women, and their partners with the same methodology. In 2004 30% of pregnant women and 24% percent of the partners stated that they had reduced alcohol consumption before pregnancy, and 66% of pregnant women and 73% of partners did not change alcohol consumption during the year before pregnancy.

**Conclusion:** Even though there has been a decline in alcohol consumption in pre-pregnancy over time, there is still a need of preconception counseling with a focus on life style changes for both women and men who are planning a pregnancy.
**P49. Women’s Health and Children’s Health Status in Turkey**

Selda Yörük, Hülya Türkmen

**Background:** The most important indicators of development and improvement of a society are the indicators relating to women’s and children’s health. The rate of infant deaths was 53 per thousand in 1990 whereas today, the rate of infant death is 07.8%, the rate of perinatal death is 08.2%, death bird rate is 1% and death rate under 5 years of age is 010.3%.

A serious advancement was observed in women’s health indicators over years. The rate of maternal mortality was decreased to 15.9 per hundred thousand. Over the past decade cesarean sections have been increased. The ratio of cesarean section among all births is 50.4% whereas the ratio of primary cesarean section among all births is 25.9%. Ministry of Health executes studies for decreasing the ratio of cesarean sections.

When we examine the fertility indicators it is observed that the ratio of intentional miscarriage is 10% whereas total fertility rate is 2.26 births per woman. When age-specific fertility is examined it is seen that fertility rate in adolescence is 5 percent. It is seen that women who are at the beginning of their fertility ages tend to give birth in Turkey.

64% of births occur before 30 years of age. Births that occur below 20 years of age and over 35 years of age in which the risk of disease and death associated with pregnancy and birth is the highest, constitute about one fifth of all births. Women who live in rural areas give births to more children than women who live in urban areas.

33% of women and 47% of women who are still married use a modern method whereas 18% of women and 26% of women who are still married use a conventional method.

Withdrawal method used by one of every four women (26 percent) is the most commonly used method among contraceptive methods. The most commonly used method by married women is IUD (17 percent). The second method which is used commonly after IUD is condoms.

**Results:** Decrease in mortality of women’s and children’s health in our country is worth to share with the other countries. However effective policies have been executed in healthcare in order to make these indicators better.
**P50. Preconception care in Turkey**

Selda Yörük, Hülya Türkmen

**Background:** In Turkey antenatal and postnatal care services are predominantly provided. In antenatal services follow-ups are performed according to national antenatal and postnatal care management guideline and high risk pregnancy management guideline. Primary care family physicians and midwifes have an important role in antenatal consultancy in our country.

There is no Standard National Preconception Care Program. Preconception care is provided as Prenuptial Consultancy and follow-up for women who are between 15-49 years of age. In the concept of prenuptial consultancy services for couples to be married, education on safe motherhood, communicable diseases, inherited diseases and family planning is provided.

The question “Are you planning to get pregnant within next year?” is asked to women who are between 19-49 years of age and fertile at intervals of 6 months annually, or when they applied to a family health center for any reason. If pregnancy is not planned healthcare professionals provide consultancy for family planning. If pregnancy is planned preconception care service is provided by a gynecologist or by a primary care health care organization. Generally, the following services are provided in preconception care:

a) Chronic diseases: Detailed chronic disease history two times a year and constantly used medications are investigated.

b) Folic acid support: To those planning pregnancy, 0.4 mg/day and 4mg/day for risky groups starting at least 1 (one) month before pregnancy are suggested.

c) Obesity: Overweight women are directed to obesity policlinic.

d) Rubella immunization: Rubella immunization of women are investigated and vaccination is recommended when necessary. In case of rubella vaccination administration, pregnancy for at least 1 month is not recommended as of the vaccination date.

e) Investigation of consanguineous marriage and genetic diseases. Those with recurrent congenital fetal abnormalities in their families are directed to appropriate centers for consultancy.

f) Substance abuse: Those with smoking addiction are directed to “smoking cessation polyclinic”

g) Nourishment: Healthy and balanced nourishment is recommended.

h) Determination of risk factors: Blood types of people applying before pregnancy are determined, and to those desiring pregnancy in adolescence or over 35 years of age risks of pregnancy are explained and necessity for a close follow-up during this period is expressed.

i) Informing about prenatal care: Information should be provided for consultation to a health institution on pregnancy.

**Conclusion:** Content of preconception care, responsibility of health personnel, follow-up’s being a written policy and integration into antenatal care are important. Coadministration of preconception care and antenatal care will be effective in protection and improvement of maternal and infant health.

When a national program was applied in Turkey, knowledge and awareness levels of healthcare personnel shall be enhanced and a standard preconception care model shall be put into practice.
P51. Importance Of Parthograph In Labor

Hülya Türkmen, Selda Yörük

**Background:** Due to complications developed in labor, maternal and fetal morbidity and mortality can be observed. The present study was conducted to emphasize significance of usage of partograph as an early warning system in terms of complications that can arise with labor.

**Methods:** The research is descriptive literature review study including the period of March-November 2015 over Balıkesir University network of EBSCOhost research engine and using Cochrane library. In this literature research, “Partograph, Labor, Midwife” keywords were run.

**Results:** According to research results, it was observed that investigated articles report that abnormal labor incidence is about 11%. WHO (2014) reports in its guide based on 27 Cochrane systematic compilation that partograph usage in birth survey serves as weak evidence but partograph usage is strongly suggested. Swedish researchers consider that utilization of partographs by midwives regularly is effective on low birth death rate for babies in their countries. American Women’s Collage suggests “Birth and Cesarean Action Management Guide” (2010); and Bayram (2009) suggests all midwives to use partograph to monitor spontaneous birth progress in all pregnancies monitored. Lavender et al. (2008) report that different partograph types have no dominance on each other. Orji (2008) determined in his study that nulliparous and multiparous are similar to each other in terms of prenatal period; and modified WHO partograph can be applied to both groups. With regard to breech delivery, WHO, Lennox et al. (1998), Tsu & Shane (2004), Fesseha et al. (2011), Kitila et al. (2014), partograph usage reduces death rates of mothers and cesarean birth rates; and enhances fetal results. In compiliation study of Seffah (2003), it was reported that uterus rupture incidence observed in Ghana has decreased significantly after introduction of partograph usage.

**Conclusion:** Although there is limited evidence with partograph usage, based on the screening results, evaluated articles report that partograph usage allows determination of birth abnormalities conveniently and reduces perinatal morbidity and mortality, maternal mortality and cesarean rates, and prevents unnecessary interventions; and they suggest that partograph can be used in monitoring of all births.