

6. Improving Women's Preconceptional Health: Long-Term Effects of the Strong Healthy Women Behavior Change Intervention in the Central Pennsylvania Women's Health Study (Weisman et al., 2011)

Topics: Pregnancy and conception, managing stress, physical activity, nutrition, preventing gynecologic infection, tobacco exposure, and alcohol use

Purpose	To investigate the long-term (6- and 12-month) effects of the Strong Healthy Women intervention on health-related behaviors, weight and body mass index, and weight gain during pregnancy
Tool/Intervention	Strong Healthy Women Intervention
Population	<ul style="list-style-type: none"> • Women in the original trial of the Strong Healthy Women intervention • Majority white, non-pregnant, pre- and interconceptional women • Ages 18-35 at enrollment
Settings	15 low-income rural communities of Central Pennsylvania
Design/Sample Size	<ul style="list-style-type: none"> • 6- and 12-month follow-up telephone interviews with participants of a randomized control trial; birth records obtained for those giving birth during 12-month follow-up • n=362
Measures	Self-report of pregnancy incidence and outcomes, reading food labels, using a daily multivitamin with folic acid, meeting recommended physical activity levels, consuming fruits and vegetables daily, weight, and BMI; birth record data on pregnancy outcomes and pregnancy weight gain
Outcomes	<ul style="list-style-type: none"> • At 12-month follow up, participants in the intervention group were significantly more likely than controls to use a daily multivitamin with folic acid and to have lower weight and BMI • Among those who had given birth during the follow-up period, women in the intervention had lower average pregnancy weight gain compared with controls • The intervention's effects on reading food labels dropped off between the 6- and 12-month follow up
Time to Implement	Two 30-minute telephone surveys

7. Integrating Reproductive Planning with Primary Health Care: An Exploration Among Low-Income, Minority Women and Men (Dunlop et al., 2010)⁴

Topics: Women 's and men's desires for a child and when they would like to have a child, and contraceptive practices to prevent pregnancy

Purpose	To explore the acceptability and utility of integrating an assessment of reproductive plans into primary care encounters
Tool/Intervention	Reproductive Plans Assessment (A part of the Georgia Preconception Care Toolkit)
Population	<ul style="list-style-type: none"> • African-American and Hispanic females and males
Settings	Publicly-funded, primary care clinics in metropolitan Atlanta, GA
Design/Sample Size	<ul style="list-style-type: none"> • Cross-sectional • n=144
Measures	<ul style="list-style-type: none"> • Demographic information form • A reproductive plans assessment questionnaire • An open-ended interview regarding comfort level with questions asked in the interview
Outcomes	<ul style="list-style-type: none"> • Overall 81% of females and 42% of males reported that the reproductive plans

⁴ The Georgia Preconception Care Toolkit includes two unique articles (Dunlop et al., 2010, 2012) that present different information on the program.

	<p>assessment was important to their encounter</p> <ul style="list-style-type: none"> • More than 45% who reported never wanting a child or not wanting a child for at least one year were at risk for unintended pregnancy • Only 1.4% of females and males reported that they currently desired to have a child
Time to Implement	1.1 minutes

<p>8. Integration of Preconception and Primary Health Care: Evaluation of a Preconception Care Toolkit (Dunlop et al., 2012) Topics: Includes; (1) Reproductive plans assessment; (2) Reproductive health risk assessment; (3) Provider monograph; (4) Counseling guides; (5) Chart checklist. (Also adapted to EPIC EMR for Grady setting.)</p>	Purpose	(1) To implement a Preconception Care Toolkit in publicly-funded primary care clinics; (2) To conduct an outcome evaluation of implementation of the Preconception Care Toolkit to assess its effect on specific provider practices and patient outcomes
	Tool/Intervention	Georgia Preconception Care Toolkit
	Population	600 African-American and Hispanic women of reproductive age
	Settings	Publicly-funded primary care clinics in metropolitan Atlanta, GA
	Design/Sample Size	<ul style="list-style-type: none"> • Cohort study: comparison of prospective intervention cohort to minimal intervention comparison group using 'difference-in-difference' between cohorts at 3-, 6-, 12-months post-intervention; as well as translatability evaluation using RE-AIM framework. • n=600
	Measures	<ul style="list-style-type: none"> • Change in general and individual preconception health knowledge • Change in provider practices • Change in women's behaviors (folic acid, contraceptive adherence, condom use, risk of unintended and "exposed" pregnancies)
	Outcomes	<ul style="list-style-type: none"> • 12-month follow-up assessments for patients to ascertain change in behaviors are currently underway • 12-month abstraction of clinical records to ascertain change in provider practices are also underway
	Time to Implement	Not reported

<p>9. Improving Preconception Care (Bernstein et al., 2000) Topics: Family planning services, domestic violence, nutrition, medical risk factors, medication use, counseling, and use of referral services</p>	Purpose	To develop and test an educational intervention for health providers to promote preconception care for all women of reproductive age
	Tool/Intervention	Preconception Health Screening/Counseling Checklist
	Population	Non-pregnant women with reproductive potential
	Settings	Inner-city hospital gynecology clinic
	Design/Sample Size	<ul style="list-style-type: none"> • A baseline chart review of a convenience sample of 100 women pre-intervention was conducted • Thirty-five providers of routine gynecologic care (attending physicians, residents, certified nurse midwives, and nurse practitioners) were administered a survey of knowledge and attitudes about PCC • A convenience sample of an additional 100 women was obtained to compare PCC dissemination before and after the intervention

Measures	Documentation of the delivery of preconception care by reporting family planning services, domestic violence, nutrition and medical risk factors, medication use, appropriate counseling and use of referral services
Outcomes	<ul style="list-style-type: none"> • Documentation of screening in almost all categories was significantly improved ($P < .05$) • The greatest improvements were noted in screening for medical risk factors (from 15% to 44%), over-the-counter and prescription medication use (from 10% to 70% and 30% to 77% respectively), domestic violence (from 10% to 57%) and nutrition (from 9% to 50%) • No significant changes in documentation of screening for infectious diseases • Provider attitudes toward preconception care were not significant
Time to Implement	Not reported

10. Preconception Care: A Screening Tool for Health Assessment and Risk Detection

(de Weerd et al., 2002)

Topics: Social, nutritional, and medical histories, infectious disease, medication, reproductive and family histories

Purpose	To compare self-administered questionnaires to history taking by a physician to evaluate the reliability of such a screening tool for prepregnancy risk detection
Tool/Intervention Population	<p>Preconception Health Assessment and an oral Family History Survey</p> <ul style="list-style-type: none"> • Couples who intended to conceive were recruited from a fertility clinic (n=121) and the clinic for preconception care (n=65) of the University Medical Center Nijmegen, Netherlands • Mean age = 32.5 years
Settings	Outpatient fertility and preconception care clinic
Design/Sample Size	<ul style="list-style-type: none"> • Questionnaire validation study • n=186 couples • Sample of convenience drawn from targeted clinics • Participants were given the preconception questionnaire for women and family history form for both women and men • Forms were taken home for completion and returned by participants at the first preconception meeting • Responses on the written form were verified by trained interviewers (physicians)
Measures	Level of agreement (Kappa Statistic) between the written information from the couples and the responses to the oral verification of responses given to the trained interviewers on social, nutritional, medical history, infectious disease, medication, reproductive and family history variables
Outcomes	<ul style="list-style-type: none"> • There was a high agreement level between written and oral versions of the questionnaire* • An excellent agreement level (overall $\kappa = 0.88$) was found for all sections of the Preconceptional Health Assessment form except for the nutritional history sections ($\kappa = 0.70$) • Family history surveys also showed a high agreement level ($\kappa = 0.92$ for women and $\kappa = 0.90$ for men) <p>*$\kappa = \geq (0.75)$ considered excellent</p>
Time to Implement	Not reported

<p>11. Validation of an Internet Questionnaire for Risk Assessment in Preconception Care (Landkroon et al., 2010) Topics: Social, nutritional, medical, infectious disease, medication, reproductive, and family histories, and toxic exposures</p>	Purpose	To compare information elicited by www.zwangerwijzer.nl with information gained by history taking by a healthcare provider among women planning to conceive
	Tool/Intervention	Zwangerzijker.nl, an online version of the Preconception Health Assessment Form (Dutch version)
	Population	Women who had an appointment at the outpatient or fertility clinics for preconception care
	Settings	Outpatient fertility and preconception clinic
	Design/Sample Size	<ul style="list-style-type: none"> • Validation study • n= 159 women completed the online questionnaire • n=106 also completed the oral verification interview for the questionnaire
	Measures	Level of agreement between responses to the online preconception questionnaire and oral history taking
	Outcomes	<ul style="list-style-type: none"> • Most lifestyle variables, including smoking, alcohol, and dietary items, showed a good to high level of agreement when compared to the oral interview • The medical history and obstetric history items also showed a good to high level of agreement with the exception of the item "uterine or cervical anomalies" ($\kappa = 0.38$) • The use of over-the-counter drugs revealed a poor level of agreement ($\kappa = 0.21$)
	Time to Implement	10 minutes

<p>12. Interpregnancy primary care and social support for African-American women. at risk for recurrent very-low-birthweight delivery: a pilot evaluation (Dunlop et al., 2008) Topics: Includes forms for targeted review of systems, clinical assessment, interpregnancy care plan for 7 areas epidemiologically-linked with poor reproductive health outcomes, and a range of tools for Resource Mother assessment and client intervention</p>	Purpose	To explore whether the provision of primary health care and social support following a VLBW delivery improves subsequent reproductive health outcomes for low-income, African-American women
	Tool/Intervention	Interpregnancy Care Assessment and Care Plan Tools
	Population	<ul style="list-style-type: none"> • Women in the Grady Interpregnancy Care Program • 29 African-American women receiving no-cost primary care, social support, and care coordination for 24 months following a VLBW delivery
	Settings	Publicly-funded hospital setting in metropolitan Atlanta
	Design/Sample Size	<ul style="list-style-type: none"> • Cohort study: comparison of prospective intervention cohort to retrospective/historical control group • n=29
	Measures	<ul style="list-style-type: none"> • Pregnancies conceived within 18 months of index VLBW delivery • Adverse pregnancy outcomes for pregnancies conceived within 18 months of index VLBW delivery
	Outcomes	Women in the control cohort had, on average, 2.57 (95% CI: 1.14 – 5.78) times as many pregnancies within 18 months of the index VLBW delivery and 3.51 (95% CI: 1.04 – 11.73) times as many adverse pregnancy outcomes as women in the intervention cohort

Time to Implement

Not reported

13. 2007 Surveillance Report: A Survey of the Health of Mothers and Babies in Los Angeles County

(Los Angeles County Department of Public Health, 2007)

Topics: Preconception health, prenatal care and maternal medical conditions during pregnancy, psychosocial conditions during pregnancy, behavioral risk factors, postpartum care and infant health

Purpose	To improve understanding of why some women have better birth outcomes than others.
Tool/Intervention	Los Angeles Mommy and Baby (L.A.M.B.) Project
Population	Mothers who are LA county residents who delivered a baby during the preceding 2 to 6 months in 2007.
Settings	Participants' home setting
Design/Sample Size	<ul style="list-style-type: none"> • Cross-sectional survey • Mixed-methods public health surveillance project to collect data using CDC's Pregnancy Risk Assessment Monitoring System (PRAMS) and population-based mail surveys. • Reminders were mailed two weeks after enrollment to nonresponders, as well as a second survey packet 7 to 10 days later. • Nonrespondents are called for a telephone interview two weeks after the second survey packet is mailed. • n= 6,264 mothers
Measures	<ul style="list-style-type: none"> • Measures of prepregnancy health status, prenatal care and maternal risk factors, psychosocial and behavioral risk factors, postpartum health, prepregnancy health • All measures were estimated by race/ethnicity, service planning area, or supervisorial district
Outcomes	<ul style="list-style-type: none"> • 70.7% of women in Los Angeles County reported not having received preconception health counseling. • 10.1% of women in Los Angeles County entered prenatal care after the 1st trimester of pregnancy. • The highest percentage for a medical condition in Los Angeles County was periodontal disease (18.9%). • 19.9% of women in Los Angeles County self-reported that they had depression. • Most women (75.7%) in Los Angeles County reported that they would have someone around to listen to their problems. • 91.5% of women in Los Angeles County received a postpartum check-up. • 98.3% of women had a well-baby check-up
Time to Implement	Not reported

<p>14. Reaching Women Through Health Information Technology: The Gabby Preconception Care System (Jack, 2012)</p> <p>Topics: Healthcare promotion, immunizations, infectious diseases, medical conditions, parental exposures, family genetic history, nutrition, environmental exposures, psychosocial risks, medications, reproductive history, and special populations</p>	Purpose	To perfect a virtual patient education advocate (VPA) that screens for and addresses preconception risks, targeting young African-American women to address high rates of poor birth outcomes
	Tool/Intervention	Preconception Risk Assessment
	Population	<ul style="list-style-type: none"> • Focus groups participants were women ages 15 to 22 years old, African-American, and not pregnant at the time of enrollment • Participants in the usability testing group were women between the ages of 15 and 25 years old and African-American • Pilot testers were women enrolled in the Office of Minority Health Preconception Peer Educator (OHM PPE) program between the ages of 18 and 25 years old, with home or school internet access, a telephone, and willing to participate in a two-month follow-up telephone call
	Settings	<ul style="list-style-type: none"> • An urban safety net hospital and university
	Design/Sample Size	<ul style="list-style-type: none"> • 8 focus groups equaling 31 participants were conducted to gather input on the online risk assessment • 15 women participated in usability testing of the program, consisting of a quantitative survey and 30 minute one-on-one interview about their experiences and impressions with the Gabby system • 9 nursing students pilot tested the system at home for two months
	Measures	<ul style="list-style-type: none"> • Usability of the system by reviewing transcripts from audio-recordings of the focus groups and one-on-one interviews • Frequencies of individual risks identified and the percentage of risks per domain from the preconception risk assessment • Participant satisfaction with the system assessed through self-administered surveys in the usability and pilot testing groups • Stage of change for each risk was assessed during two-month follow-up phone calls
	Outcomes	<ul style="list-style-type: none"> • Results have been compiled and a report developed that is currently under review for publication • A randomized controlled trial has been planned with funding from the federal government
	Time to Implement	12 minutes

<p>15. County of San Diego Health and Human Services (HHS) Agency, 2012</p> <p>Topics: Nutrition, weight and exercise, stress management, family planning, medical and dental check-ups, communicating with a health care provider, smoking/alcohol/drug use and environmental exposures, and resources</p>	Purpose	To gather client (consumer) and staff feedback on materials for the Preconception Health Awareness Project consisting of three versions of the Preconception WHEELS tool and fact sheets
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Tool/Intervention	Preconception WHEELS
Population	<p>Clients: African-American and Hispanic women, as well as women in the general population</p> <p>Staff: Case Manager/Client Service Specialist, Community Perinatal Health Worker, Program Manager, Program Director, and Educator</p> <p>Focus Groups: African-American and Hispanic women, as well as women in the general population from various organizations</p>
Settings	<p>Clients: Private provider, health clinic, community, and county organizations</p> <p>Staff: Lifetime Women's Healthcare, Black Infant Health Program, SAY San Diego-Start Smart, Horn of Africa-Family Together Program, and Family Health Centers San Diego-Logan Heights</p> <p>Focus Groups: Various settings including a community baby shower, home visits, clinics, classroom and health fairs</p>
Design/Sample Size	<p>Pilot project to assess feedback from consumers and staff through surveys and focus groups about program materials</p> <p>Clients: n= 15 organizations submitted 321 client surveys</p> <p>Staff: n=5 organizations submitted 13 client surveys</p> <p>Focus Groups: n= 4 focus groups with a total of 22 participants</p>
Measures	<p>Client and Staff: Client and staff feedback on the program materials through focus groups, a client survey, and a staff survey</p> <p>Staff: Staff feedback on how the wheels and fact sheets fit into their routine practices working with clients</p>
Outcomes	<p>Clients:</p> <ul style="list-style-type: none"> •88% of clients felt they learned new information •The most helpful sections of the tools reported were: eat right (63%), take care (52%), manage stress (52%) and get moving (47%) <p>Staff: 91% of staff stated it was easy to incorporate the wheels into their routine practices and that they facilitated health behavior and lifestyle discussions with clients</p> <p>Focus Groups:</p> <ul style="list-style-type: none"> •59% of focus group participants reported using information or tips from the wheel •77% of focus group participants learned something new
Time to Implement	Less than 9 minutes

16. Health Team Works, 2012 <i>Topics: Folic acid, body weight, smoking, alcohol & drugs, STIs & other infectious diseases, immunizations, psychosocial risks, reproductive history, family & genetic history, environmental exposures, medical & psychiatric history, and medications</i>	Purpose	To imbed guideline content into the practice setting and/or initiate the facilitation of a clinic's process change
	Tool/Intervention	Colorado Guidelines for Preconception and Interconception Care
	Population	Clinical and non-clinical staff
	Settings	Public health-family planning clinic, pediatric practice, OB/GYN practice, and a college health services clinic
	Design/Sample Size	<ul style="list-style-type: none"> • Recruited 5 Health Team Works Rapid Improvement Activities (RIA) training sites • Implemented RIA within the women's health teams with a focus on preconception care and the Colorado Guidelines • Each health site created implementation plans with supporting goals
	Measures	<ul style="list-style-type: none"> • The percentage of goals that were achieved at follow-up • Examples of goals included collecting BMI as well as counseling and tracking patients on overweight and obesity
	Outcomes	At 3 month follow-up, 70% of the goals set at the time of the initial RIA had been sustained
	Time to Implement	1 hour

17. Los Angeles (LA) County Public Health, 2012 <i>Topics: Alcohol use, anemia, chronic hypertension, domestic violence, gestational diabetes, gonorrhea, chlamydia, hepatitis B & C, HIV, immunizations, migraine, overweight, postpartum depression, preeclampsia, premature birth, prior caesarean, seizure, substance use, syphilis, thrombocytopenia, thyroid disorder, and tobacco use</i>	Purpose	To enable all women to have at least one clinical visit before their next conception
	Tool/Intervention	Interconception Care Project of California (California Algorithms)
	Population	Various levels of providers including nurses, doctors, and social workers
	Settings	Kaiser Permanente of California, HMO, MMO, and Medicare clinic settings
	Design/Sample Size	<ul style="list-style-type: none"> • ACOG volunteers were split into teams to research specific topics and develop recommendations for the algorithms • n=200 volunteers
	Measures	<ul style="list-style-type: none"> • Patient and provider feedback on the tools • California Department of Public Health is trying to track downloads of the tool
	Outcomes	<ul style="list-style-type: none"> • Changes were made to the tool based on feedback from the volunteers • The tool will be submitted as a California March of Dimes Big 5 Project for TX, FL, NY, CA, and IL
	Time to Implement	Not reported

18. Wisconsin (WI) Association for Perinatal Care & Perinatal Foundation, 2012
 Topics: Family medical history, maternal/paternal medical history, reproductive health, nutrition, home, work, or social hazards, and parenting considerations

Purpose	To help women and men identify health risks and take action before pregnancy
Tool/Intervention	Becoming A Parent Checklist
Population	Prenatal, interconception, and postpartum women
Settings	HMOs, prenatal clinics (high risk groups), Planned Parenthood of Wisconsin, and Bellin College
Design/Sample Size	<ul style="list-style-type: none"> • Baccalaureate nursing class project at Bellin College • Students completed the checklist as consumers, and then assessed their responses as providers • n= 100+
Measures	<ul style="list-style-type: none"> • Students were tasked with identifying problems revealed by completed checklists, why the problem was a concern, and assessing the impact of the problem on pregnancy • Personal reflections were written to determine what students learned and what they would suggest to increase preconception planning in the health care system
Outcomes	<ul style="list-style-type: none"> • Two to three students out of every 100 would say that their providers had asked about their plans to become pregnant • Students were surprised at the list of things to consider about pregnancy and the implications of not planning a pregnancy • Students emphasized the need for more consumer education and incorporating the question, “Are you thinking of becoming pregnant?” to increase preconception planning through the health care system
Time to Implement	Not reported

19. Boston Public Health Commission, 2012
 Topics: Medical history, patient-provider communication, health care access, psychosocial risks, safety, stress, environmental exposures, neighborhood safety, violence, economic concerns, and patient care satisfaction

Purpose	To identify medical and social risk factors among women of childbearing age in an effort to improve health prior to conception
Tool/Intervention	Women's Health Questionnaire
Population	Pregnant and parenting African-American women
Settings	Boston community health centers, hospital outpatient clinics, and Healthy Start Initiative agencies
Design/Sample Size	Not reported
Measures	<ul style="list-style-type: none"> • Risk factors included nontraditional topic areas such as environmental health exposures, neighborhood safety, violence, economic concerns, and patient satisfaction with care • Assessed at intake, and at the end of the first and second years after delivery
Outcomes	Not reported
Time to Implement	Not reported

ABOUT THE MATRICES

The following matrices (Table 2) compare the components of preconception care and corresponding topics (specific risk factors and health conditions), as outlined in “The Clinical Content of Preconception Care” by Jack, Atrash, and Coonrod et al., 2008 to the components and topics found in the environmental scan. Each black dot within the matrices indicates that the tool addressed at least one or more topics within the larger specified component of preconception care. The tools for which specific topics could be identified include a list of additional information to the side of each dot. The author of each tool aligns with the author name and year as it appears within the environmental scan database, emphasizing the entry that corresponds to each tool.

Table 2: Preconception/Interconception Screening Tools and Interventions Matrix

Potential Components and Topics of Preconception Care ¹	Preconception Health Appraisal (Moos-Cefalo 1989, 1996)	Preconception Risk Survey (Jack 1995, 1998)	Preconception Health Screening/Counseling Checklist (Bernstein 2000)	Preconception Health Assessment (de Weerd 2002)
Health Promotion – family planning and reproductive life plan, physical activity, weight status, nutrient intake, folate, immunizations, substance use, STIs	<ul style="list-style-type: none"> ● weight status, nutrient intake, immunizations, substance use, STIs 	<ul style="list-style-type: none"> ● family planning, nutrient intake, immunizations, substance use, STIs 	<ul style="list-style-type: none"> ● family planning, physical activity, substance use 	<ul style="list-style-type: none"> ● physical activity, weight status, nutrient intake, STIs
Immunizations – HPV, hepatitis B, varicella, MMR, influenza, Tdap vaccinations	<ul style="list-style-type: none"> ● rubella 	<ul style="list-style-type: none"> ● hepatitis B, rubella 	<ul style="list-style-type: none"> ● HPV, hepatitis B, varicella, rubella 	<ul style="list-style-type: none"> ● HPV, rubella
Infectious Disease – HIV, hepatitis C, TB, toxoplasmosis, CMV, listeriosis, parvovirus, malaria, gonorrhea, chlamydia, syphilis, herpes, asymptomatic bacteruria, periodontal disease, bacterial vaginosis, group B streptococcus	<ul style="list-style-type: none"> ● HIV, toxoplasmosis, herpes, gonorrhea, chlamydia, syphilis 	<ul style="list-style-type: none"> ● HIV, hepatitis, gonorrhea, chlamydia, syphilis, herpes 	<ul style="list-style-type: none"> ● HIV, toxoplasmosis 	<ul style="list-style-type: none"> ● HIV, hepatitis, toxoplasmosis, gonorrhea, chlamydia, herpes
Medical Conditions – diabetes mellitus, thyroid disease, PKU, seizure disorders, hypertension, rheumatoid arthritis, lupus, renal disease, cardiovascular disease, thrombophilia, asthma	<ul style="list-style-type: none"> ● diabetes, PKU, epilepsy, hypertension, renal disease, heart disease 	<ul style="list-style-type: none"> ● diabetes, thyroid disease, PKU, epilepsy, hypertension, lupus, renal disease, heart disease, asthma 	<ul style="list-style-type: none"> ● diabetes, thyroid disease, hypertension, renal disease, cardiovascular disease, asthma 	<ul style="list-style-type: none"> ● diabetes, thyroid disease, epilepsy, hypertension, lupus, renal disease, heart disease, asthma
Psychiatric Conditions – depression, anxiety, bipolar disease, schizophrenia	—	<ul style="list-style-type: none"> ● depression, anxiety 	—	<ul style="list-style-type: none"> ● suicide, admission to psychiatric ward or mental institution
Parental Exposures – alcohol, tobacco, illicit substances	<ul style="list-style-type: none"> ● All 	<ul style="list-style-type: none"> ● All 	<ul style="list-style-type: none"> ● All 	<ul style="list-style-type: none"> ● All
Family & Genetic History – ethnicity based, family history, previous pregnancies, known genetic conditions	<ul style="list-style-type: none"> ● ethnicity based, family history, known genetic conditions 	<ul style="list-style-type: none"> ● ethnicity based, family history, known genetic conditions 	<ul style="list-style-type: none"> ● ethnicity based, family history, known genetic conditions 	<ul style="list-style-type: none"> ● previous pregnancies
Nutrition – dietary supplements, vitamin A, folic acid, multivitamins, vitamin D, calcium, iron, essential fatty acids, iodine, overweight, underweight, eating disorders	<ul style="list-style-type: none"> ● multivitamins, overweight, underweight 	<ul style="list-style-type: none"> ● folic acid, multivitamins 	<ul style="list-style-type: none"> ● folic acid, vitamin D, calcium, eating disorder 	<ul style="list-style-type: none"> ● multivitamins, eating disorders
Environmental Exposures – mercury, lead, soil and water hazards, workplace and household exposures	<ul style="list-style-type: none"> ● lead, work and house exposures 	<ul style="list-style-type: none"> ● lead, work and house exposures 	<ul style="list-style-type: none"> ● lead, work exposures 	<ul style="list-style-type: none"> ● work and house exposures
Psychosocial Risk – inadequate financial resources, access to care, physical/sexual abuse	<ul style="list-style-type: none"> ● physical abuse 	<ul style="list-style-type: none"> ● inadequate financial resources, access to care, physical/sexual abuse 	—	—
Medication – prescription, over-the-counter, dietary supplements	<ul style="list-style-type: none"> ● prescription, OTC 	<ul style="list-style-type: none"> ● prescription 	<ul style="list-style-type: none"> ● prescription, OTC 	<ul style="list-style-type: none"> ● prescription, OTC
Reproductive History – prior preterm birth, prior cesarean delivery, prior miscarriage, prior stillbirth, uterine anomalies	<ul style="list-style-type: none"> ● miscarriage, stillbirth, uterine anomalies, 	<ul style="list-style-type: none"> ● preterm birth, C-section, miscarriage, stillbirth, uterine anomalies, 	<ul style="list-style-type: none"> ● preterm birth, stillbirth, uterine anomalies 	<ul style="list-style-type: none"> ● preterm birth, miscarriage, uterine anomalies
Special Populations – women with disabilities, immigrant and refugee populations, cancer, men	—	<ul style="list-style-type: none"> ● cancer 	—	<ul style="list-style-type: none"> ● cancer

Table 2: Preconception/Interconception Screening Tools and Interventions Matrix (continued)

Potential Components and Topics of Preconception Care ¹	Georgia Preconception Care Toolkit (Dunlop 2010, 2012)	Preconception Health Assessment Online (Zwangerzijzer.nl) (Landkroon 2010)	Preconception Risk Assessment (Gabby Intervention) (Jack 2012)	Colorado Guidelines for Preconception Interconception Care (Health Team Works 2012)
Health Promotion – family planning and reproductive life plan, physical activity, weight status, nutrient intake, folate, immunizations, substance use, STIs	●reproductive life plan, STIs	●STIs	●All	●Immunizations
Immunizations – HPV, hepatitis B, varicella, MMR, influenza, Tdap vaccinations	●vaccination status	●rubella	●All	● HPV, hepatitis B, MMR, varicella, Tdap
Infectious Disease – HIV, hepatitis C, TB, toxoplasmosis, CMV, listeriosis, parvovirus, malaria, gonorrhea, chlamydia, syphilis, herpes, asymptomatic bacteruria, periodontal disease, bacterial vaginosis, group B streptococcus	● HIV, toxoplasmosis	●toxoplasmosis	●HIV, hepatitis C, TB, gonorrhea, chlamydia, syphilis, herpes	● HIV, TB, gonorrhea, chlamydia, syphilis
Medical Conditions – diabetes mellitus, thyroid disease, PKU, seizure disorders, hypertension, rheumatoid arthritis, lupus, renal disease, cardiovascular disease, thrombophilia, asthma	●diabetes, thyroid disease, epilepsy, hypertension, lupus	● diabetes, thyroid disease, epilepsy, hypertension, arthritis, renal disease, heart disease, thrombosis, asthma	●All	●diabetes, thyroid, PKU, epilepsy, hypertension, arthritis, lupus, renal disease, heart disease, asthma
Psychiatric Conditions – depression, anxiety, bipolar disease, schizophrenia	●depression	—	●All	●depression, bipolar disorder, schizophrenia
Parental Exposures – alcohol, tobacco, illicit substances	●All	●All	●All	●All
Family & Genetic History – ethnicity based, family history, previous pregnancies, known genetic conditions	●ethnicity based, family history, known genetic conditions	●family history, previous pregnancy, genetic conditions,	● ethnicity based, family history, known genetic conditions	● ethnicity based, known genetic conditions
Nutrition – dietary supplements, vitamin A, folic acid, multivitamins, vitamin D, calcium, iron, essential fatty acids, iodine, overweight, underweight, eating disorders	● dietary supplements, folic acid	● vitamin A, folic acid, eating disorders	●All	●folic acid, overweight, underweight
Environmental Exposures – mercury, lead, soil and water hazards, workplace and household exposures	●work exposures	●work and house exposures	●All	●soil and water hazards, work and house exposures
Psychosocial Risk – inadequate financial resources, access to care, physical/sexual abuse	●physical/sexual abuse	—	●All	●physical/sexual abuse
Medication – prescription, over-the-counter, dietary supplements	●All	●prescription, OTC	●All	●prescription, dietary supplements
Reproductive History – prior preterm birth, prior cesarean delivery, prior miscarriage, prior stillbirth, uterine anomalies	●preterm birth, miscarriage	●All	●All	●preterm birth, prior C-section, stillbirth, uterine anomaly
Special Populations – women with disabilities, immigrant and refugee populations, cancer, men	—	●cancer	●All	—

Table 2: Preconception/Interconception Screening Tools and Interventions Matrix (continued)

Potential Components and Topics of Preconception Care ¹	Interconception Care Project of California (LA County Public Health 2012)	Becoming A Parent Checklist (WI Assoc. for Perinatal Care 2012)	Strong Healthy Women Intervention (Hillemeier 2008; Weisman 2011)	Preconception WHEELS (County of San Diego HHS Agency 2012)
Health Promotion – family planning and reproductive life plan, physical activity, weight status, nutrient intake, folate, immunizations, substance use, STIs	●immunizations, substance use	●family planning, weight status, nutrient intake	● family planning, physical activity, weight status, nutrient intake, immunizations	● family planning, physical activity, weight status , immunizations, STIs
Immunizations – HPV, hepatitis B, varicella, MMR, influenza, Tdap vaccinations	●All	● hepatitis B, varicella, mumps , rubella,	●hepatitis B, varicella, rubella	—
Infectious Disease – HIV, hepatitis C, TB, toxoplasmosis, CMV, listeriosis, parvovirus, malaria, gonorrhea, chlamydia, syphilis, herpes, asymptomatic bacteruria, periodontal disease, bacterial vaginosis, group B streptococcus	● HIV, hepatitis C, gonorrhea, chlamydia, syphilis	● HIV, TB, toxoplasmosis, gonorrhea, chlamydia, syphilis, herpes	● HIV, gonorrhea, chlamydia, syphilis, herpes, bacterial vaginosis	—
Medical Conditions – diabetes mellitus, thyroid disease, PKU, seizure disorders, hypertension, rheumatoid arthritis, lupus, renal disease, cardiovascular disease, thrombophilia, asthma	● diabetes, thyroid disorder, epilepsy, hypertension	● diabetes, thyroid disease, epilepsy, hypertension, lupus, renal disease, heart disease, asthma	● diabetes, hypertension, heart disease	●diabetes, hypertension
Psychiatric Conditions – depression, anxiety, bipolar disease, schizophrenia	●depression	●depression, anxiety, bipolar disorder	—	—
Parental Exposures – alcohol, tobacco, illicit substances	●All	●All	●alcohol, tobacco	●All
Family & Genetic History – ethnicity based, family history, previous pregnancies, known genetic conditions	—	●family history, known genetic conditions	—	—
Nutrition – dietary supplements, vitamin A, folic acid, multivitamins, vitamin D, calcium, iron, essential fatty acids, iodine, overweight, underweight, eating disorders	●overweight	●folic acid, eating disorders	● folic acid, overweight, underweight	● folic acid, multivitamins, overweight, underweight,
Environmental Exposures – mercury, lead, soil and water hazards, workplace and household exposures	—	●lead, water hazards, work and house exposures,	—	●work and house exposures
Psychosocial Risk – inadequate financial resources, access to care, physical/sexual abuse	●physical/sexual abuse	●physical/sexual abuse	● access to care, physical/sexual abuse	—
Medication – prescription, over-the-counter, dietary supplements	—	●All	—	●All
Reproductive History – prior preterm birth, prior cesarean delivery, prior miscarriage, prior stillbirth, uterine anomalies	●preterm birth, prior C-section	● preterm birth, miscarriage, stillborn,	—	—
Special Populations – women with disabilities, immigrant and refugee populations, cancer, men	—	●cancer	—	—

Table 2: Preconception/Interconception Screening Tools and Interventions Matrix (continued)

Potential Components and Topics of Preconception Care ¹	Grady Interpregnancy Program (Dunlop 2008)	Los Angeles Mommy & Baby (L.A.M.B.) Project (LA County Public Health 2007)	Women's Health Questionnaire (Boston Public Health Commission 2012)	Total
Health Promotion – family planning and reproductive life plan, physical activity, weight status, nutrient intake, folate, immunizations, substance use, STIs	• family planning, reproductive life plan, nutrient intake, substance use, STIs	• physical activity, nutrient intake, STIs	•family planning	15
Immunizations – HPV, hepatitis B, varicella, MMR, influenza, Tdap vaccinations	• hepatitis B, rubella	—	—	12
Infectious Disease – HIV, hepatitis C, TB, toxoplasmosis, CMV, listeriosis, parvovirus, malaria, gonorrhea, chlamydia, syphilis, herpes, asymptomatic bacteruria, periodontal disease, bacterial vaginosis, group B streptococcus	• HIV, chlamydia, bacterial vaginosis	•bacterial vaginosis	•hepatitis C	14
Medical Conditions – diabetes mellitus, thyroid disease, PKU, seizure disorders, hypertension, rheumatoid arthritis, lupus, renal disease, cardiovascular disease, thrombophilia, asthma	• diabetes, hypertension	• diabetes, hypertension, asthma	• thyroid disorder, epilepsy, hypertension, heart disease	15
Psychiatric Conditions – depression, anxiety, bipolar disease, schizophrenia	•depression, anxiety	•depression	•depression, anxiety	11
Parental Exposures – alcohol, tobacco, illicit substances	•All	•All	•All	15
Family & Genetic History – ethnicity based, family history, previous pregnancies, known genetic conditions	—	—	•family history	10
Nutrition – dietary supplements, vitamin A, folic acid, multivitamins, vitamin D, calcium, iron, essential fatty acids, iodine, overweight, underweight, eating disorders	•folic acid, multivitamins, calcium	•multivitamins, overweight	•eating disorders	15
Environmental Exposures – mercury, lead, soil and water hazards, workplace and household exposures	—	—	—	10
Psychosocial Risk – inadequate financial resources, access to care, physical/sexual abuse	• All	•inadequate financial resources, access to care, physical/sexual abuse	•physical/sexual abuse	11
Medication – prescription, over-the-counter, dietary supplements	•prescription	—	•All	12
Reproductive History – prior preterm birth, prior cesarean delivery, prior miscarriage, prior stillbirth, uterine anomalies	• preterm birth, stillbirth	•preterm birth, miscarriage, stillbirth	•preterm birth, miscarriage	13
Special Populations – women with disabilities, immigrant and refugee populations, cancer, men	—	—	—	5

Source: ¹Jack BW, Atrash H, Coonrod DV, Moos M-K, O'Donnell J, Johnson K. The clinical content of preconception care: an overview and preparation of this supplement. American Journal of Obstetrics and Gynecology 2008; 199: S266-S79.

Additional Preconception Screening Tools and Interventions

The following list represents additional screening tools and interventions that were found during the environmental scan, but did not meet our inclusion criteria. Most of these tools are available online or by request from the author.

- Preconception Screening and Counseling Checklist (March of Dimes and Upper Hudson Prenatal Services Network)⁵
- Preconception Care, Version 3.0 (Mater Mothers' Hospital, Brisbane South East Alliance of General Practice)⁶
- Preconception/Prenatal Family Health History Questionnaire (March of Dimes Foundation)⁷
- Thinking About Tomorrow: Preparing for your own health and the health of any future children (Merry-K Moos)⁸
- Healthy Births for Healthy Communities : Interconceptional Questionnaire Version 3.2⁹
- Comprehensive Perinatal Services Program: Initial Combined Assessment (CDPH 4455) (California Department of Public Health)¹⁰
- Preconception Screening and Counseling Checklist (Illinois Department of Healthcare and Family Services)¹¹

⁵ March of Dimes, Upper Hudson Prenatal Services. Preconception Screening and Counseling Checklist. Available at <http://health.utah.gov/mihp/pdf/preconceptool.pdf>

⁶ Mater Mothers' Hospital, Brisbane South East Alliance of General Practice. Preconception Care. (June 2010). Available at <http://www.brisbanesouth.com.au/content/Document/Resources/Prac%20Support/Pre%20Conception%20Care%20Booklet.pdf>

⁷ March of Dimes Foundation. Preconception/Prenatal Family Health History Questionnaire. (2008). Available at http://www.marchofdimes.com/Your_family_health_historypreconceptionprenatal.pdf

⁸ Moos, MK. Thinking about tomorrow: preparing for your own health and the health of any future children. (2010). Available by request from the author

⁹ Healthy Births for Healthy Communities. (2009). Available at http://healthybirths.files.wordpress.com/2011/01/iccp_survey_v3-2-_03-04-09.pdf

¹⁰ California Department of Public Health. Comprehensive perinatal services program: initial combined assessment (CDPH 4455). (2005). Available at http://cchealth.org/services/perinatal/pdf/cpsp_provider_handbook.pdf

¹¹ Illinois Department of Health care and Family Services. Preconception Screening and Counseling Checklist. (2007). Available at <http://www.chtc.org/dl/handouts/20080617/Handout%202.pdf>